

THE
CLASS BOOK
OR,
THREE HUNDRED AND SIXTY FIVE
READING LESSONS,

ADAPTED TO
The Use of Schools;
FOR
EVERY DAY IN THE YEAR.

SELECTED, ARRANGED, AND COMPILED, FROM
THE BEST AUTHORITIES.

By THE REV. DAVID BLAIR,
AUTHOR OF READING EXERCISES, THE UNIVERSAL PRECEPTOR

A NEW EDITION.

LONDON:
PRINTED FOR
LONGMAN, REES, ORME, BROWN, AND GREEN,
PATERNOSTER-ROW; AND

WHOLESALE OF ALL BOOKSELLERS IN TOWN AND COUNTRY.

1828.

Entered at Stationers' Hall.

PREFACE.

THE following work claims for its compiler no higher merit than that of goodness of intention; and the compiler claims for his work the simple recommendation of its utility.

The Lessons have been selected on the principle of combining, as far as the subjects would admit, the beauties of composition with instruction in every important branch of knowledge; and they have been arbitrarily appropriated to the exact number of the days of the year, for the convenience of large schools.

On a cursory view of the subject, it will appear extraordinary that no book possessed of similar pretensions should heretofore have had existence. No axioms have more just foundation than these:

That the greatest possible number of facts ought to be submitted to the observation of children; and,

That instruction in any particular art or science ought, as far as possible, to be rendered subsidiary to the communication of facts on all other branches of knowledge.

Thus, in teaching the art of reading, it is an obvious waste of the precious period devoted to education, to confine the exercises in that art to mere combination of words; or to compositions, the sole object of which is to prove the wit and genius of the writer;—to compositions which do not teach any thing, which are often unintelligible to young persons, and which, after a volume of them has been perused and re-perused for years, leave the mind in a state of listless curiosity and total ignorance.

In proof of the justice of this remark, the compiler need only appeal to the feelings of the persons who, while they were at school, read no other books than the selections published under the titles of Speakers, Readers, Extracts, and Beauties. As exercises in elocution, and as examples of elegant composition, such books cannot be sufficiently commended: but they are ill adapted to the more important objects of instruction; and with regard to the purposes of general knowledge, they bear the same relation that ~~reading bears~~ to gold, or pastime to useful labour.

~~It is not~~ ^{It is not} may be the merit or demerit of the Reading Lessons contained in this book, the compiler has not ~~pared~~ ^{pared} upon them either time or labour. It is now up-

wards of twenty years since he first conceived the plan of the work ; and he has during that time availed himself of considerable practice as a teacher, and of much miscellaneous reading, to bring together such elegant passages from the best writers, native and foreign, as illustrate with the happiest perspicuity the leading facts and principles of knowledge and science.

Although he has generally quoted the authors whose writings have formed the bases of the several Lessons ; yet, as it was necessary to compress each within a certain length, their precise words have not in general been retained, but a certain degree of verbal compression has been resorted to. These liberties were requisite to the completion of the compiler's plan ; and they are thus formally acknowledged, lest the authors who are quoted should be made answerable for the sins of the compiler. Many of the Lessons to which no names are annexed, have either been compressed from anonymous works, or consist of the amalgamation of the language of various authors who have written on the same subject.

The SUNDAY LESSONS are peculiarly adapted to public or private reading on the Sabbath ; and they also afford a valuable class of extra Lessons for particular occasions on any other day of the week.

An Index of the subjects has been annexed, for the use of those teachers who may prefer successive courses of reading on particular subjects, to the studied variety which characterises the entire work.

The Editor of this work has been induced to arrange an easy introductory book, under the title of READING EXERCISES FOR THE USE OF SCHOOLS, which he presumes will be found worthy of the attention of Teachers. Price 2s.

LONDON, April, 1819.

Also may be had,

THE BRITISH NEPOS, consisting of Select Lives of the illustrious Britons, from Alfred the Great to Lord Nelson. By W. MAJOR, LL.D. Price 5s.

CLASSICAL ENGLISH POETRY. Selected by Dr. MAJOR, Price 5s. 6d.

A SELECTION of the LIVES of PLUTARCH. By W. MAJOR, LL.D. Price 5s. 6d.

THE ELEMENTS of NATURAL HISTORY, for the Use of Schools. By Dr. MAJOR. Price 7s. 6d. bound.

CONTENTS

JANUARY.

	Page
JANUARY 1. Natural Phenomena in January	1
2. On Industry and Application	2
3. The Swiftmess of Time	3
4. Alfred, King of England	4
5. Appeal to Benevolence	5
6. The Four Great Monarchies	6
7. On the First Principles of Religion	7
8. Beauties of Natural History	9
9. A Picture of Human Life, or the Vision of Mirza	11
10. The Vision of Mirza continued	12
11. The Vision of Mirza concluded	14
12. William the First	15
William the Second	16
13. Advantages of a good Education	17
14. Piety the Foundation of Goodness	18
15. Brief Survey of the Infinite Universe	19
16. Of the Solar System	22
17. Necessity of considering both Sides of a Question	23
18. Henry I. — Stephen	25
Henry II.	26
19. A Father's Advice to his Son	27
20. The Art of Pleasing	29
21. Superiority of the Sacred Writings	30
22. Description of the Laplanders	31
23. The great Earthquake at Lisbon, in 1755	33
24. The great Earthquake at Lisbon, continued	34
25. The great Earthquake at Lisbon, concluded	36
26. Richard I. — John	38
27. Instructions for writing Letters	39
28. Friendship recorded in the Scriptures	40
29. The Different Stages of Life	42
30. Necessity of preserving Order	43
31. The Industry of Demosthenes	45

FEBRUARY.

FEBRUARY 1. The Month of February	47
2. Henry III.	48
Edward I.	49
3. Phenomena of Winter in the Polar Regions	50
4. Self-knowledge	51
5. On the Sun	52
6. Virtue Man's true Interest	54
7. Animal and Vegetable Nature compared	55

CONTENTS.

	Page
FEBRUARY 8. Edward II.	57
Edward III.	58
9. On Politeness	59
10. In what Happiness consists	60
11. The dependence of Beings upon each other	61
12. On our Moon	65
13. General Rules for the Attainment of Knowledge . .	64
14. Acknowledgment of Error the Mark of a wise and generous Mind	65
15. Richard II.	67
16. On Vulgarity	68
17. On Good-Breeding	69
18. The Advantages of Devotion	71
19. Of our Earth	72
20. Ancient Rome	74
21. Henry IV.	75
22. Liberty and Despotism	76
23. The Folly of Ambition exposed — in the Speech of the Scythian Ambassadors to Alexander the Great	77
24. On the Choice of Company	79
25. On the Study of the Holy Scriptures	81
26. The Grotto of Antiparos	82
27. Customs of various Nations in their Repasts	84
28. Advantages of a Taste for the Beauties of Nature ...	85

MARCH.

MARCH 1. Natural Phenomena of the Month of March	87
2. Destruction of the Alexandrian Library	89
3. Advantages of good Elocution	90
4. On the Period and Uses of Human Life	91
5. Singular Properties of some Minerals	95
6. Our Obligations to the Country	94
7. Our Obligations to the Country, concluded	96
8. Resignation of the Emperor Charles V.	97
9. On Music as an Amusement	99
10. Henry V.	100
Henry VI.	101
11. Early Exercise of our Faculties	102
12. The Forms and Divisions of Time	104
13. Envy and Emulation	105
14. The Science of Botany	107
15. Edward IV. — Edward V. — Richard III. Henry VII.	109
16. Examples of Filial Affection	110
17. Of the Lion	112
18. Necessity of good Principles in early Life	113
19. On the Power of raising the Hand to the Head ...	115
20. The Folly of Anger	116
21. Of Comets	118
22. Henry VIII.	120
23. Character of a Miser	121

	Page
MARCH 24. The Parts of Speech	122
25. On the Being of a God	124
26. On Truth and Sincerity	125
27. The Choice of Hercules	127
28. Of the Elephant	129
29. Edward VI. — Queen Mary	131
30. Account of the admirable Crichton	132
31. Importance of a good Character	134

APRIL.

APRIL 1. Natural Phenomena of April	136
2. On the Character of St. John	137
3. On the Art of Public Speaking	138
4. Queen Elizabeth	140
5. On the Government of the Temper	141
6. The Banian Tree, or Indian Fig	143
7. Of the earliest Ages of the World	144
8. The Morning Hymn of Eve	146
9. On the Sea	147
10. On the Neglect of early Improvement	149
11. The Torrid and Frigid Zones	150
12. On Parental Tenderness and Filial Gratitude	151
13. James I.	153
14. Of the principal Rivers in England	154
15. On Envy	156
16. Sketch of London, the Metropolis of Great Britain	158
17. Pleasure and Pain	159
18. Various Phenomena of the Ocean	161
19. Of the Winds	162
20. On Emphasis and Pauses	164
21. On the Duties of School Boys	165
22. Sects of the Jews at the Time of Christ	166
23. Progress of Sensation in the first Man	168
24. Different Methods of improving in Knowledge ...	169
25. Religion the Foundation of Content. — An Allegory	171
26. Religion the Foundation of Content, continued ...	172
27. Religion the Foundation of Content, concluded ...	173
28. Of the Natural Curiosities of England	175
29. On Filial Tenderness	176
30. Of the Nature of the Tides	177

MAY.

MAY 1. Natural Phenomena of the Month of May	178
2. Rules for improving the Mind	180
3. On the Surface and Strata of the Earth	181
4. The celebrated Cataract of Niagara, in Canada ...	182
5. Wise and remarkable Sayings of eminent Men ...	183
6. The Heart and Affections	184
7. The Horse and Camel	185
8. Of Rivers	187
9. The Seasons	188

CONTENTS.

	Pag
MAY 10. The Influence of an Early Taste for Reading ...	189
11. The Danger of keeping bad Company.....	191
12. On the Air and Atmosphere	192
13. Virtuous and religious Habits	193
14. Nature and Properties of the Air.....	194
15. Affection and Sagacity of Animals	196
16. The Golden Mean	197
17. On the Inequalities of the Surface of the Globe...	198
18. Resentment	199
19. Of the Commerce of England	201
20. On Cruelty to Animals	202
21. The Science of Geography.....	203
22. Examples of diligent Employment of Time	204
23. Principal Varieties of the Human Race	205
24. Character of Oliver Cromwell	207
25. Varieties of the Human Race, continued	208
26. On History	209
27. Filial Affection	210
28. Obligations of Charity	212
29. The Elements subservient to the Wants of Man...	213
30. Of the Constitution of England	215
31. The Origin of Language	216

JUNE.

JUNE 1. Natural Phenomena of the Month of June	218
2. Character of Charles II.....	219
3. The Presence of God	220
4. Ice and Ice Islands in the Ocean	221
5. Against Cruelty to Animals	222
6. Against Cruelty to Animals, continued	224
7. Against Cruelty to Animals, concluded	225
8. Description of Constantinople	226
9. Destruction of Carthage	228
10. Of doing as we would be done unto.....	229
11. The Mechanical Wonders of a Feather	230
12. Cautions against ill Conduct in Company.....	232
13. James II.....	233
14. On Modesty and Assurance	234
15. Varieties of the Human Race, continued	235
16. Rise and Progress of the Art of Writing.....	237
17. Preponderance of good Dispositions in Mankind...	238
18. Varieties of the Human Race, continued.....	239
19. Of the Division of Labour	241
20. Varieties of the Human Race, continued	242
21. Further Effects of the Division of Labour	243
22. Capture of Rome by the Goths in the year 410 ...	244
23. On Ship-building and Navigation.....	245
24. Against an excessive Love of Praise.....	247
25. The Metropolis of China	248
26. The Covering of different Animals	250
27. Rise and Progress of the Art of Writing, continued	251
28. The Camel	252

	Page
JUNE 29. On Books and Reading	253
30. The Punishment of Crimes by the Laws of England	254

JULY.

JULY 1. Phenomena of the Month of July	256
2. Night	247
3. Of the English Universities	258
4. Labour and Rest — An Allegory.....	260
5. Labour and Rest, continued.....	262
6. Cook's first Voyage round the World	263
7. Cook's second Voyage round the World	264
8. The Dispensations of Providence to Man	266
9. Account of Mahomet.....	267
10. The Discovery of America by Columbus.....	268
11. A Lesson to Pride ; or, The Basket-maker.....	270
12. A Lesson to Pride, continued	271
13. A Lesson to Pride, concluded	272
14. Cook's third Voyage round the World	274
15. A Father's Advice to his Son	276
16. Character of Washington	276
17. Of the Executive Government of England.....	277
18. Climate of the West Indies	279
19. The Coffee-Tree.....	280
20. Manner of fishing for Pearls in the East Indies ...	281
21. The Beauties of Vegetation	282
22. On Social Worship.....	283
23. Character of George I.	285
24. Ice-Islands, and Icebergs	286
25. On Animal Instinct	287
26. Account of the First Crusade	288
27. Account of the First Crusade, continued	290
28. The Second and Third Crusades	291
29. On Profane Swearing.....	292
30. Character and Reign of George II.....	293
31. Solon and Croesus	294

AUGUST.

AUGUST 1. Natural Phenomena of August	296
2. Confucius, the Chinese Philosopher.....	297
3. Of the Diamond	298
4. On Procrastination.....	299
5. Of the Duties of Friendship.....	301
6. Of Thales, Heraclitus, Democritus, and Simonides	302
7. Fitness of Things to their Purposes	303
8. The Horse	304
9. The Ass	305
10. Description of Mount Vesuvius	306
11. Of Animalcules	308
12. Importance of Virtue	309
13. On the Manufacture of Paper	310

CONTENTS.

	Page
AUGUST 14. Alexander the Great	312
15. On the Vice of Lying.....	313
16. Of the Relation of Sleep to Night	314
17. Adaptation of animated Bodies to inanimate Nature	315
18. Mount <i>Ætna</i>	316
19. Advantages of Public Worship.....	317
20. The Copernican System described.....	318
21. Comparative View of the Ancients and Moderns	319
22. Of the Natural and Artificial Divisions of Time... ..	320
23. Use of Time—Punctuality—and Dispatch	321
24. The Loadstone	322
25. The Salt-mine near Cracow in Poland	323
26. On Natural Philosophy	325
27. Day and Night, and the Seasons	326
28. The Designs of Providence	327
29. On Cleanliness	329
30. On the Order of Nature	330
31. On Intemperance in Eating	331

SEPTEMBER.

SEPTEMBER 1. Phenomena of the Month of September	332
2. Attributes of the Deity	335
3. On the Senses of Sight, Hearing, Smell, and Taste	337
4. The Price of Pleasure	339
5. The Olympic Games	337
6. Structure of the Human Body.....	338
7. The Animal and Vegetable World compared	340
8. Dangers of Sloth and Luxury	341
9. The Omnipresence of God	342
10. Sagacity displayed in the Habitations of Beavers	343
11. The Ruins of Herculaneum	345
12. The Habitations of Animals.....	346
13. The Hare and the Tortoise	347
14. A Gas Light Manufactory.....	348
15. On Manufactures	350
16. Grandeur and Magnificence of Nature	351
17. On Evaporation and Distillation	352
18. On Metals	353
19. The Progress of Life.....	355
20. Rules for Conversation	356
21. On the Reformation of the Calendar.....	357
22. Of Friendship between Brothers and Sisters	359
23. Beauty and Variety of Nature	360
24. History and Progress of Agriculture	361
25. Nature and Phenomena of Light.....	363
26. On the Tea Plant	364
27. A Chemical Lecture on Tea-making	365
28. On the Buildings of the Beavers	367
29. On the Insect Tribes	368
30. Connection of the Works of Nature	370

OCTOBER.

	Page
OCTOBER 1. Phenomena of the Month of October	371
2. Of the Clothing of Animals	372
3. Of the Dog	373
4. Winter Sleep of Animals and Plants	375
5. On the Sense of Feeling, and the Faculty of Speech	376
6. The principal Manufactures in England	377
7. Against Sloth	378
8. Religious Intolerance	379
9. Further Observations on Animalculæ	381
10. On the Arts	382
11. Ceremonics of the Chinese	383
12. The Metamorphoses of Insects	384
13. Phenomena of the Vegetable Kingdom	386
14. Youth and Age compared	387
15. The Pyramids of Egypt	388
16. Of Homer	389
17. The Art of Painting	390
18. Characteristics of the Hindoos	391
19. The four learned Ages	392
20. Of the Laplanders, and Rein-deer	394
21. Historical Account of the Apostles	395
22. Manufacture of Pins and Needles	396
23. On the Migration of Birds	398
24. The Migration of Fishes	399
25. On Sound	400
26. Of the Hot Spouting Springs of Water in Iceland	401
27. The Wonders of the Human Voice	402
28. Duty of Praise and Thanksgiving	404
29. Ornaments and Accomplishments of Education ...	405
30. Observations on the Accomplishments of Youth...	406
31. Pythagoras	407

NOVEMBER.

NOVEM. 1. Phenomena of the Month of November	409
2. The Invention of the Telescope	410
3. The Microscope	412
4. On Common Honesty	413
5. On the Sympathy of the Parts of the Human Body	414
6. On the Natural History of the Bee	416
7. The Labours of the Bee	417
8. Functions and Growth of the Leaves of Plants ...	419
9. The Strawberry Plant	420
10. Modes of Salutation among various Nations	422
11. Abuses of True Christianity	423
12. The Molehill, a Lesson for Pride	425
13. Properties and Uses of Cork	427

	Page
NOVEM. 14. The Web of the Spider	428
15. On Vision	429
16. Theory of the Universe	431
17. Origin of Chimneys	433
18. Vicissitude of Human Affairs	434
19. On Philosophy	436
20. On Philosophy and its Divisions	437
21. The Coal-Mines of England.....	438
22. The Lead-Mines in Somersetshire.....	439
23. The Copper-Mines of Cornwall	440
24. The Tin-Mines of Cornwall	441
25. On the Obligation to relieve the Poor	442
26. The Iron-Works of England	443
27. The Thermometer and Barometer.....	444
28. The Invention and Progress of Printing.....	445
29. Observations of one who was born blind, and ob- tained his Sight by Couching	447
30. Natural History of the Wasp	448

DECEMBER.

DECEM. 1. Phenomena of the Month of December	449
2. Eulogy on Christianity	451
3. Against Cruelty to Animals	452
4. Further Observations on Cruelty to Animals	453
5. Invention of Clocks and Watches.....	455
6. The Sugar-Cane	456
7. Invention of Coaches	457
8. The City of Babylon	459
9. The different Books of the Bible	460
10. The Peak of Teneriffe	462
11. On Colours.....	463
12. On Clouds and Rain	464
13. The English, Oriental, Latin, and Greek Languages	466
14. On Electricity.....	467
15. Of Thunder and Lightning	468
16. The different Books of the Bible, continued	470
17. Julius Cæsar	471
18. Of the Eclipses of the Sun and Moon.....	473
19. Beauty of the Morning	474
20. Origin of Commerce, and the Use of Money	475
21. On the English Nation	477
22. Account of the principal Heathen Gods	478
23. The different Books of the Bible, concluded.....	480
24. Of Elocution and Oratory.....	481
25. The Founder of Christianity.....	483
26. The Age of Chivalry.....	484
27. Account of the principal Heathen Goddesses	485
28. Self-Learning and Books	487
29. Character of the principal Nations of Europe	488
30. On the Existence of Evil	490
31. On the Nourishment and Growth of Animals.....	491

LESSONS

FOR

EVERY DAY IN THE YEAR.

JANUARY THE FIRST.

Natural Phenomena in January.

STERN Winter's icy breath, intensely keen,
Now chills the blood, and withers ev'ry green;
Bright shines the azure sky serenely fair,
Or driving snows obscure the turbid air.

CIVILIZED nations in general have agreed to date the commencement of the year on the first of January, within few days after the *winter-solstice*, or shortest day, which always takes place on the 21st of December.

In the month of January, the weather in the British islands is commonly either a clear dry frost; or fog and snow, occasionally intermingled with rain. Nothing can be more wonderful than the effects of frost; which, in the space of a single night, stops the running stream in its course, and converts the lake that was curled by every breeze into a firm plain.

Water when frozen is expanded; that is, it takes up more room than before. If a bottle of water, close corked, be set to freeze, the bottle will be broken from want of room for the water to expand in. Even cannons filled with water, plugged up at the muzzle and touch-hole, have been burst by an intense frost. This property of frost produces a beneficial effect to the farmer; for the hard clods of the ploughed fields are loosened and broken to pieces by the swelling of the water within them when it freezes, and thus the earth is prepared for receiving the seed in spring.

The water of clouds freezing slowly crystallizes in little icy darts or stars, forming by their assemblage the beautiful flakes of snow. Its whiteness is owing to the smallness of the particles into which it is divided; for ice when pounded becomes equally white. Snow is very useful by protecting the plants it covers from the severity of the frost. Hailstones are drops of rain suddenly congealed into a hard mass, so as to preserve their figure. They often fall in warmer seasons of the year, as even then the upper regions of the atmosphere are very cold. When

dew or mist freezes, as it frequently does, on every object on which it falls, it becomes hoar frost, producing figures of incomparable beauty and elegance.

As the cold of this inclement season advances, the birds collect in flocks, and, rendered bold by want, approach the habitations of man. The wild quadrupeds also are driven from their accustomed haunts: hares enter the gardens to browse on cultivated vegetables, and, leaving their tracks in the snow, are frequently hunted down or caught in snares. The hen-roosts are pillaged by foxes, polecats, and other small beasts of prey, bred in this country; but, in these islands, we are happily unacquainted with the ravenous troops of wolves, bears, and other fierce creatures, which, urged by famine at this season of the year, often terrify the villagers in the mountainous and woody regions on the continent.

The domestic cattle require all the care and protection of the farmer. Sheep are often lost in sudden storms, by which the snow is drifted into hollows, so as to bury them a considerable depth beneath it; yet they have been known to survive many days in this situation. Cows receive their subsistence from the provision of the farm-yard; and early lambs and calves are kept within doors, and tended with nearly as much care as the farmer's own children.

The plants at this season are defended by nature from the effects of cold. Those called *herbaceous*, which die down to the root every autumn, are safely concealed under ground; and the shrubs and trees that are exposed to the open air, have all their soft and tender parts closely wrapped up in buds, which, by their texture, resist the effects of frost, and are hence aptly termed by Linnæus the *hibernacula* (or winter-quarters) of the young shoots.

AIKIN.

JANUARY THE SECOND.

On Industry and Application.

DILIGENCE, industry, and proper improvement of time, are material duties of the young; and to no purpose are they endowed with the best abilities, if they want activity for exerting them. In youth the habits of industry are most easily acquired; in youth the incentives to it are strongest, from ambition and from duty, from emulation

and hope, and from all the prospects which the beginning of life affords.

Industry is not only the instrument of improvement, but the foundation of pleasure; (for nothing is so opposite to the true enjoyment of life, as the relaxed and feeble state of an indolent mind.)

He who is a stranger to industry may possess, but he cannot enjoy. It is labour only that gives a relish to pleasure. It is the indispensable condition of our possessing a sound mind in a sound body. Idleness is so inconsistent with both, that it is hard to determine, whether it be a greater foe to virtue, or to health and happiness. Inactive as it is in itself, its effects are fatally powerful. Though it appears a slowly-flowing stream, yet it undermines all that is stable and flourishing.* It is like water, which first putrefies by stagnation, and then sends up noxious vapours, filling the atmosphere with death.

No affluence of fortune, or elevation of rank, exempts the possessor from the duties of application and industry: for industry is the law of our being; it is the demand of nature, of reason, and of God. — Flee therefore from idleness, as the certain parent both of guilt and of ruin. And under idleness may be included not merely inaction, but all that circle of trifling and frivolous occupations, in which too many saunter away their youth. Youth requires amusements: it would be vain, it would be cruel, to prohibit them. But though allowable as the relaxation, they are highly culpable as the business, of the young: for they then become the gulf of time, and the poison of the mind: they foment bad passions, they weaken the manly powers, and sink the native vigour of youth into contemptible effeminacy.

HUGH BLAIR.

JANUARY THE THIRD.

The Swiftness of Time.

It is wisely observed by the moralist, that our globe seems particularly fitted for the residence of beings placed here only for a short time, whose task is to advance themselves to a higher and happier state of existence by unremitted vigilance of caution, and activity of virtue.

The duties of man are such as human nature does not willingly perform; and such as those are inclined to delay, who yet intend some time to fulfil them. It is therefore necessary that this universal reluctance should be counter

acted, and the drowsiness of hesitation awakened into resolve; that the danger of procrastination should be always in view, and the fallacies of security be hourly detected. To this end all the appearances of nature uniformly conspire; all we see on every side reminds us of the lapse of time, and the flux of life. The day and the night succeed each other; the rotation of seasons diversifies the year; the sun rises, attains the meridian, declines and sets; and the moon every night changes its form.

If the wheel of life, which rolls thus silently along, passed on through undistinguishable uniformity, we should never mark its approaches to the end of its course. If one hour were like another, if the passage of the sun did not show that the day is wasting, if the change of seasons did not impress upon us the flight of the year, if the parts of time were not variously coloured, we should never discern their departure or succession, but should live thoughtless of the past and careless of the future,—without will, and perhaps without power, to compute the periods of life, or to compare the time which is already lost with that which may probably remain. But the course of time is so visibly marked, that it is even observed by nations who have raised their minds very little above animal instinct: there are human beings whose language does not supply them with words by which they can number five: but we know of none who have not names for day and night, for summer and winter.

Yet these admonitions of nature, however forcible, however importunate, are too often vain; and many who mark with accuracy the lapse of time, appear to have little sensibility of the decline of life. Every man has something to do, which he procrastinates; every man has faults to conquer, which he delays to combat. From this inattention, so general and so mischievous, let it be every man's study to exempt himself. Let him who desires to see others happy, make haste to give while his gift can be enjoyed; and let him who seeks his own happiness, reflect that while he forms his purpose the day rolls on, and the "night comes, when no man can work." JOHNSON.

JANUARY THE FOURTH.

Alfred, King of England.

THE merit of this prince, both in private and public life, may with advantage be set in opposition to that of

any monarch, or citizen, which the annals of any age or any nation can present to us. He seems indeed to be the complete model of that perfect character, which, under the denomination of a sage or wise man, the philosophers have been fond of delineating, rather as a fiction of their imagination, than in hopes of ever seeing it reduced to practice; so happily were all his virtues tempered together, so justly were they blended, and so powerfully did each prevent the other from exceeding its proper bounds.

He knew how to conciliate the most enterprising spirit with the coolest moderation; the most obstinate perseverance, with the easiest flexibility; the most severe justice, with the greatest lenity; the greatest vigour in command, with the greatest affability of deportment; the highest capacity and inclination for science, with the most shining talents for action.

His civil and his military virtues are almost equally the objects of our admiration, excepting only, that the former, being more rare among princes, as well as more useful, seem chiefly to challenge our applause. Nature also, as if desirous that so bright a production of her skill should be set in the fairest light, had bestowed on him all bodily accomplishments; vigour of limbs, dignity of shape and air, and a pleasant, engaging, and open countenance. Fortune alone, by throwing him into a barbarous age, deprived him of historians worthy to transmit his fame to posterity. Alfred died in the year 897, aged 52. HUME.

JANUARY THE FIFTH.

Appeal to Benevolence.

Al! little think the gay licentious proud,
Whom pleasure, power, and affluence surround;
They who their thoughtless hours in giddy mirth,
And wanton, often cruel, riot waste;
Ah! little think they, while they dance along,
How many feel this very moment death,
And all the sad variety of pain:—
How many sink in the devouring flood,
Or more devouring flame:—how many bleed,
By shameful variance betwixt man and man:—
How many pine in want, and dungeon-gloom,
Shut from the common air, and common use ✓

Of their own limbs:—how many drink the cup
 Of baleful grief, or eat the bitter bread
 Of misery:—sore pierc'd by wintry winds,
 How many shrink into the sordid hut
 Of cheerless poverty:—how many shake
 With all the fiercer tortures of the mind,
 Unbounded passion, madness, guilt, remorse;
 Whence, tumbled headlong from the height of life,
 They furnish matter for the tragic muse:—
 Even in the vale where wisdom loves to dwell,
 With friendship, peace, and contemplation join'd,
 How many, rack'd with honest passions, droop
 With deep-retir'd distress:—how many stand
 Around the death-bed of their dearest friends,
 And point the parting anguish. Thought, fond man,
 Of these, and all the thousand nameless ills
 That one incessant struggle render life,
 One scene of toil, of suffering, and of fate,
 Vice in his high career would stand appall'd,
 And heedless rambling Impulse learn to think;
 The conscious heart of Charity would warm,
 And her wide wish Benevolence dilate;
 The social tear would rise, the social sigh;
 And into clear perfection, gradual bliss,
 Refining still, the social passions work.

THOMSON

JANUARY THE SIXTH.

The Four Great Monarchies.

THERE have been four successive empires called *universal*, because they extended over a great part of the then known world. They began and ended in the following manner:

1st, *The Babylonian empire*, which is the first recorded in history, was founded by Ninrod, about the year of the world 1786, or 2218 years before the birth of Christ; and was finally destroyed by the conquest of Babylon, by Cyrus, after a continuance of 1680 years.

2d, *The Assyrian empire* commenced in the building of the city of Nineveh (its subsequent metropolis) by Ashur, who was nearly cotemporary with Ninrod. Its last emperor was Sardanapalus, a weak and effeminate monarch, in whose time, about the year 750 before Christ, it was destroyed, when Sardanapalus himself was con-

surged in the flames of his own capital, and the inhabitants of Nineveh were carried captive to Babylon. This empire endured about 1450 years.

3d, *The Persian empire*, which begun under Cyrus, about the year of the world 3450, (or 554 years before the birth of Christ,) and ended in Darius, after a duration of 220 years.

4th, *The Macedonian empire*, of which the first foundation was laid by the conquests of Philip, King of Macedon, father of Alexander the Great. It rose to its greatest height under Alexander, and terminated at his death, 323 years before Christ; on which event his vast dominions were partitioned by his generals. The duration of this empire in its widest extent was very short; as Alexander reigned only thirteen years.

The histories of some of these extensive empires, now totally disappear, or are involved in impenetrable darkness and confusion. The extent of the Babylonian empire, though not known with certainty, must have been prodigious. It is certain that it comprehended Phenicia, Palestine, Syria, Babylonia, Media, Persia, and perhaps India; all of which countries contributed to increase the splendour and magnificence of Babylon.

Long before the destruction of the Persian empire, by Alexander, it had become involved in quarrels with Greece, which much weakened it. Xerxes exhibited the vast resources of his empire by invading Greece with an immense army, said to have consisted (with its attendants), of nearly five millions of souls.

Macedonia, before the time of Philip, was merely an insignificant and barbarous nation, lying to the north of the Grecian states; but under that warlike and crafty monarch, and his son Alexander, its empire spread over the whole civilized world, and even penetrated into regions which no European army had before explored.

CHAPONE.

JANUARY THE SEVENTH.

On the First Principles of Religion. (A Sunday Lesson.*)

HITHERTO you have "thought as a child, and understood as a child; but it is time to put away childish things,"

* Since this work was published, a volume of *Sermons for Schools*, adapted to every Sunday and great Holiday, by the Rev. S. BARROW, has usefully varied the course of Sunday Reading.

and store your mind with those principles which must direct your conduct and fix your character. Virtue and happiness are not attained by chance, or by a cold and languid approbation; they must be sought with ardour, attended to with diligence, and every assistance must be eagerly embraced that may enable you to obtain them. Consider, that good and evil are now before you; that, if you do not heartily choose and love the one, you must undoubtedly be the wretched victim of the other.

The first step must be, to awaken your mind to a sense of the importance of the task before you. This is no less than to bring your frail nature to that degree of Christian perfection which is to qualify it for immortality, and without which it is necessarily incapable of happiness: for it is a truth never to be forgotten, that God has annexed happiness to virtue, and misery to vice, by the unchangeable nature of things; and that a wicked being, while he continues such, is under a natural incapacity of enjoying happiness, even with the concurrence of all those outward circumstances which in a virtuous mind would produce it.

The only sure foundation of human virtue is religion; and the foundation and the first principle of religion, is the belief of the one only God, and a just sense of his attributes. To form worthy notions of the Supreme Being, as far as we are capable, is essential to true religion and morality; for, as it is our duty to imitate those qualities of the Divinity which are imitable by us, so it is necessary we should know what they are, and fatal to mistake them.

How lamentable it is, that so few hearts should feel the pleasures of real piety! that prayer and thanksgiving should be performed, as they too often are, not with joy, and love, and gratitude; but with cold indifference, melancholy dejection, or secret horror!—Let your devotion be the language of filial love and gratitude: confide to this kindest of Fathers every want and every wish of your heart; but submit them all to his will, and freely offer him the disposal of yourself and of all your affairs. Thank him for his benefits, and even for his punishments; convinced that these also are benefits, and mercifully designed for your good. Implore his direction in all difficulties; his assistance in all trials; his comfort and support in sickness or affliction; his restraining grace in time of prosperity and joy.

Forget not to dedicate yourself to his service every

day; to implore his forgiveness of your faults, and his protection from evil, every night; and this not merely in formal words, unaccompanied by any act of the mind, but "in spirit and in truth," in grateful love and humble adoration. Nor let these stated periods of worship be your only communication with him; accustom yourself to think often of him, in all your waking hours; to contemplate his wisdom and power, in the works of his hands; to acknowledge his goodness in every object of use or of pleasure; to delight in giving him praise in your inmost heart, in the midst of every innocent gratification, in the liveliest hour of social enjoyment.

True devotion is not a melancholy sentiment, that depresses the spirits, and excludes the ideas of pleasure, in which youth delights; on the contrary, there is nothing so friendly to joy, so productive of true pleasure, so peculiarly suited to the warmth and innocence of a youthful heart. Do not therefore think it too soon to turn your mind to God; but offer him the first-fruits of your understanding and affections; and be assured that the more you increase in love to him, and delight in his laws, the more you will increase in happiness, in excellence, and honour; that in proportion as you improve in true piety, you will become dear and amiable to your fellow-creatures, contented and peaceful in yourself, and qualified to enjoy the best blessings of this life, as well as to inherit the glorious promise of immortality.

CHAPONE.

JANUARY THE EIGHTH.

Beauties of Natural History.

ANIMATED Being is that branch of Natural History which possesses charms the most numerous and diversified, and is fraught with the most important consequences to man; but this division of nature cannot be comprised at a glance. It is advisable, that the student should begin with examining the nature and qualities of such *quadrupeds* as are most familiar to his observation. Even in the dog and horse, how many properties reside which are hourly experienced, but seldom considered with attention! From such objects as are most obvious and inviting, he should gradually ascend by firm and patient steps to the knowledge of others.

The larger animals, and such as contribute to general

pleasure and utility, will doubtless first engage his attention. After duly scanning their nature and instincts, their growth, their maturation, their increase, the care of their young, their selection of food, and the various means with which Providence has endowed them for their preservation, the student should descend to an examination of such quadrupeds as are more minute, or retired from his notice; and, when he is tolerably well acquainted with those of his own country, should extend his views to the natives of foreign regions.

The sagacious docility of the elephant, the persevering fortitude of the camel, the generous magnanimity of the lion, and the savage fierceness of the hyena and the tiger, will supply abundant materials for reflection, and incentives to further and closer investigation. It will be thus discovered how the useful quadrupeds are wisely allotted to their respective climates, and to the exigencies of man; and how the noxious classes are generally restrained to haunts little frequented by our race, while their numbers are limited by the most admirable and benevolent economy of nature.

After this acquaintance with the history of quadrupeds, the student should proceed to *birds*, the most beautiful and most innocent tribes of the creation; and learn the means by which they are enabled to subsist either on land or water; the invariable structure of their nests, according to their respective kinds; and the fond affection they display for their young. He will find that those birds whose beauty of plumage excites his admiration, are generally destitute of harmonious voices; so that the parrot, the peacock, and pheasant, disgust by their screams, while the homely lark, the nightingale, and blackbird, delight by the sweetness of their melody, and captivate unseen.

Reptiles, the next class in animated nature, are far less numerous and less inviting. In the formidable alligator, in the poisonous serpent, in the harmless tortoise, and the lively frog, very opposite qualities will be discovered; but in all will still be discernible a perfect fitness to their respective situations in the scale of creation.

The next class to which the student should turn his attention is that of *fishes*. The confirmation of these, their wonderful adaptation to the element which they inhabit, their amazing fecundity, their powers and faculties, though inferior to those of birds and beasts, will challenge his admiration. and animate his researches.

The science of entomology, or of *insects*, is so extensive as to baffle the most inquisitive investigator. Every plant, every leaf, is the abode or food of one or more species, some of which are imperceptible to the naked eye. All insects are propagated from eggs, and, by a wonderful law of nature, undergo several metamorphoses before they arrive at their perfect state. The caterpillar, the aurelia, and the butterfly so distinguishable from each other, are but one and the same animal in different stages of its existence. Even the minutest insect is formed with as much skill as the most stately quadruped; and is equally qualified to enjoy life, and to transmit that life to posterity. A general knowledge, however, of this numerous class will be sufficient; and from insects he will extend his observation to worms, including the shelly tribe, the beauty and the mechanism of which baffle all description.

In these, life seems to be scarcely active, and to many of them a locomotive power is denied; yet even the *zoo-phyte* which connects the animal with the vegetable kingdom, even the animalcule that floats in the liquors which we drink, or lodges in our food, has its sphere of duties to fulfil, and its share of blessings to enjoy.

From the study of animated being, let the curious student direct his attention to *vegetables*; from vegetables to *minerals*; and from the garniture produce of the earth, to the celestial orbs that roll in the abyss of space; the planets in their regular courses, the comets in their eccentric orbits, and the myriads of fixed stars that adorn the vaults of heaven. How amazing is the contemplation of the universe! Wonders crowd on wonders; and the mind is bewildered, till it recurs to the Supreme universal Cause, and reposes on the bosom of Omnipotence.

MAVOR'S *Natural History*.

JANUARY THE NINTH.

A Picture of Human Life, or the Vision of Mirza.

ON the fifth day of the moon, which, according to the custom of my forefathers, I always keep holy, after having washed myself, and offered up my morning devotions, I ascended the high hills of Bagdat, in order to pass the rest of the day in meditation and prayer. Here I fell into a profound contemplation on the vanity of human life; and, passing from one thought to another. Surely,

said I, man is but a shadow, and life a dream.—While I was thus musing, I cast my eyes towards the summit of a rock that was not far from me, where I discovered one in the habit of a shepherd, with a little musical instrument in his hand. As I looked upon him, he applied it to his lips, and began to play upon it. The sound of it was exceedingly sweet, and wrought into a variety of tunes that were inexpressibly melodious, and altogether different from any thing I had ever heard: they put me in mind of those heavenly airs that are played to the departed souls of good men upon their first arrival in Paradise, to wear out the impression of the last agonies, and qualify them for the pleasures of that happy place. My heart melted away in secret raptures.

When he had raised my thoughts by those transporting airs which he played, to taste the pleasures of his conversation, he beckoned to me, and by the waving of his hand, directed me to approach the place where he sat. I drew near with that reverence which is due to a superior nature; and as my heart was entirely subdued by the captivating strains I had heard, I fell down at his feet and wept. The Genius smiled upon me with a look of compassion and affability, that familiarised him to my imagination, and at once dispelled all the fears and apprehensions with which I approached him. He lifted me from the ground; and, taking me by the hand, Mirza, said he, I have heard thee in thy soliloquies: follow me.

He then led me to the highest pinnacle of the rock; and, placing me on the top of it, Cast thy eyes castward, said he, and tell me what thou seest.—I see, said I, a huge valley, and a prodigious tide of water rolling through it.—The valley that thou seest, said he, is the vale of misery; and the tide of water that thou seest, is part of the great tide of eternity.—What is the reason, said I, that the tide I see rises out of a thick mist at one end, and again loses itself in a thick mist at the other?—What thou seest, said he, is that portion of eternity which is called time, measured out by the sun, and reaching from the beginning of the world to its consummation. ADDISON.

JANUARY THE TENTH

The Vision of Mirza continued

EXAMINE now, said the Genius, this sea, that is bounded by darkness at both ends, and tell me what thou disco-

verest in it. — I see a bridge, said I, standing in the midst of the tide. — The bridge thou seest, said he, is human life; consider it attentively. — Upon a more leisurely survey of it, I found that it consisted of threescore and ten entire arches, with several broken arches, which, added to those that were entire, made up the number about a hundred. As I was counting the arches, the Genius told me that this bridge consisted at first of a thousand arches; but that a great flood swept away the rest, and left the bridge in the ruinous condition in which I now beheld it. — But tell me further, said he, what thou discoverest on it. — I see multitudes of people passing over it, said I, and a black cloud hanging on each end of it.

As I looked more attentively, I saw several of the passengers dropping through the bridge into the great tide that flowed underneath it; and upon further examination, perceived there were innumerable trap-doors that lay concealed in the bridge, upon which the passengers no sooner trod, but they fell through them into the tide, and immediately disappeared. These hidden pitfalls were set very thick at the entrance of the bridge; so that throngs of people no sooner broke through the cloud, but many of them fell into them. They grew thinner toward middle, but multiplied and lay closer together toward the end of the arches that were entire.

There were indeed some persons, but their number was very small, that continued a kind of hobbling march on the broken arches; but fell through, one after another, being quite tired and spent with so long a walk.

I passed some time in the contemplation of this wonderful structure, and the great variety of objects which it presented. My heart was filled with a deep melancholy, to see several dropping unexpectedly in the midst of mirth and jollity, and catching at every thing that stood by them to save themselves. Some were looking up toward the heavens in a thoughtful posture, and, in the midst of their speculations, tumbled, and fell out of sight. Multitudes were very busy in the pursuit of bubbles, that glittered in their eyes, and danced before them; but often, when they thought themselves within the reach of them, their footing failed, and down they sunk. In this confusion of objects, I observed some with scymitars in their hands, and others with phials, who ran to and fro upon the bridge, thrusting several persons on trap-doors which did not seem to lie in their way, and which they might have escaped had they not been thus forced upon them.

. ADDISON.

JANUARY THE ELEVENTH.

The Vision of Mirza concluded.

THE Genius seeing me indulge myself in this melancholy prospect, told me I had dwelt long enough upon it: Take thine eyes off the bridge, said he, and tell me if thou seest any thing thou dost not comprehend.—Upon looking up, What mean, said I, those great flights of birds, that are perpetually hovering about the bridge, and settling upon it from time to time? I see vultures, harpies, ravens, cormorants, and, among many other feathered creatures, several little winged boys, that perch in great numbers upon the middle arches.—These, said the Genius, are envy, avarice, superstition, despair, love, with the like cares and passions that infest human life.

I here fetched a deep sigh: Alas, said I, man was made in vain: how is he given away to misery and mortality: tortured in life, and swallowed up in death!—The Genius, being moved with compassion toward me, bade me quit so uncomfortable a prospect. Look no more, said he, on man in the first stage of his existence, in his setting out for eternity; but cast thine eye on that thick mist, into which the tide bears the several generations of mortals that fall into it.

I directed my sight as I was ordered, and saw the valley opening at the further end, and spreading forth into an immense ocean that had a huge rock of adamant running through the midst of it, and dividing it into two equal parts. The clouds still rested on one half of it, insomuch that I could discover nothing in it: but the other appeared to me a vast ocean, planted with innumerable islands that were covered with fruits and flowers, and interwoven with a thousand little shining seas that run among them.

I could see persons dressed in glorious habits, with garlands upon their heads, passing among the trees, lying down by the sides of fountains, or resting on beds of flowers; and could hear a confused harmony of singing birds, falling waters, human voices, and musical instruments. Gladness grew in me at the discovery of so delightful a scene. I wished for the wings of an eagle, that I might fly away to those happy seats; but the Genius told me there was no passage to them, except through the gates of death, that I saw opening every moment upon the bridge.

The islands, said he, that lie so fresh and green before thee, and with which the whole face of the ocean appears

spotted, as far as thou can see, are more in number than the sands on the sea-shore; there are myriads of islands behind those which thou here discoverest, reaching further than thine eye, or even thy imagination can extend itself.

These are the mansions of good men after death; who, according to the degree and kinds of virtue in which they excelled, are distributed among these several islands, which abound with pleasures of different kinds and degrees, suitable to the perfections of those who are settled in them: every island is a paradise accommodated to its respective inhabitants. Are not these, O Mirza, habitations worth contending for? Does life appear miserable, that gives the opportunities of earning such a reward? Is death to be feared, that will convey thee to so happy an existence? Think not man was made in vain, who has such an eternity reserved for him.

I gazed with inexpressible delight on these happy islands. At length I said, Show me now, I beseech thee, the secrets that lie hidden under those dark clouds, which cover the scene on the other side of the rock of adamant.

The Genius making me no answer, I turned about to address myself to him a second time, but I found that he had left me: I then turned again to the vision which I had been so long contemplating; but, instead of the rolling tide, the arched bridge, and the happy islands, I saw nothing but the hollow valley of Bagdat, with oxen, sheep, and camels, grazing upon the sides of it. ADDISON.

JANUARY THE TWELFTH.

William the First.

Few princes have been more fortunate than William, sur-named the Conqueror; or were better entitled to prosperity and grandeur, for the abilities and vigour of mind which he displayed in all his conduct. His spirit was bold and enterprising, yet guided by prudence. His ambition, which was exorbitant, and lay little under the restraints of justice, and still less under those of humanity, ever submitted to the dictates of reason and sound policy. Born in an age when the minds of men were intractable, and unacquainted with submission, he was yet able to direct them to his purposes; and, partly from the ascendant of his vehement disposition, partly from art and dissimulation, to establish an unlimited monarchy. Though not insensible to generosity.

he was hardened against compassion ; and seemed equally ostentatious in his clemency and in his severity.

The maxims of his administration were severe ; but might have been useful, had they been solely employed in preserving order in an established government : they were ill calculated for softening the rigours which, under the most gentle management, are inseparable from conquest. His attempt against England was the last great enterprise of the kind, which, during the course of seven hundred years, has fully succeeded in Europe ; and the force of his genius broke through those limits, which first the feudal institutions, then the refined policy of princes, have fixed to the several states of Christendom.

Though he rendered himself infinitely odious to his English subjects, he transmitted his power to posterity, and the throne is still filled by his descendants : a proof that the foundations which he laid were firm and solid ; and that amidst all his violence, while he seemed only to gratify the present passion, he had still an eye toward futurity. His stature was tall, and the composition of his bones and muscles uncommonly strong : there was scarcely a man of that age who could bend his bow, or handle his arms. He died September 9. 1087, aged 63.

William the Second.

The memory of William, surnamed Rufus from his red hair and florid complexion, is transmitted to us with little advantage by the churchmen, whom he had offended ; and though we may suspect that their account of his vices is somewhat exaggerated, his conduct affords little reason for contradicting the character they have assigned him, or for attributing to him any very estimable qualities.

He seems to have been a violent and tyrannical prince ; a perfidious, encroaching, and dangerous neighbour ; an unkind and ungenerous relation. He was equally prodigal and rapacious in the management of the treasury ; and if he possessed abilities, he lay so much under the government of impetuous passions, that he made little use of them in his administration : and he indulged without reserve that domineering policy which suited his temper ; and which, if supported, as it was in him, with courage and vigour, proves often more successful in disorderly times, than the deepest foresight and most refined artifice.

The monuments which remain of this prince in England are the Tower, Westminster-Hall, and London Bridge, which he built. William Rufus died August 2. 1100, aged 40.

HUME.

JANUARY THE THIRTEENTH.

Advantages of a good Education.

I CONSIDER a human soul without education, like marble in the quarry; which shows none of its inherent beauties, until the skill of the polisher fetches out the colours, makes the surface shine, and discovers every ornamental cloud, spot, and vein, that runs through the body of it. Education, after the same manner, when it works upon a noble mind, draws out to view every latent virtue and perfection; which, without such helps, are never able to make their appearance.

If my reader will give me leave to change the allusion so soon upon him, I shall make use of the same instance to illustrate the force of education, which Aristotle has brought to explain his doctrine of substantial forms; when he tells us that a statue lies hidden in a block of marble, and that the art of the statuary only clears away the superfluous matter, and removes the rubbish. The figure is in the stone, and the sculptor only finds it. What sculpture is to a block of marble, education is to a human soul.

The philosopher, the saint, or the hero, the wise, the good, or the great man, very often lies hidden and concealed in a plebeian, which a proper education might have disinterred, and have brought to light. I am therefore much delighted with reading the accounts of savage nations, and with contemplating those virtues which are wild and uncultivated; to see courage exerting itself in fierceness, resolution in obstinacy, wisdom in cunning, patience in sullenness and despair.

Men's passions operate variously, and appear in different kinds of actions, according as they are more or less rectified and swayed by reason. When we hear of negroes who, upon the death of their masters, or upon changing their service, hang themselves upon the next tree, as it has sometimes happened in our plantations, who can forbear admiring their fidelity, though it expresses itself in so dreadful a manner? To what might not that savage greatness of soul, which appears in these poor wretches on

many occasions, be raised, were it rightly cultivated? And what colour of excuse can there be for the contempt with which we treat this part of our species, that we should not put them upon the common footing of humanity?

It is therefore an unspeakable blessing, to be born in those parts of the world where wisdom and knowledge flourish; though it must be confessed there are, even in these parts, several poor uninstructed persons, who are but little above the inhabitants of those nations of which I have been here speaking; as those who have had the advantages of a more liberal education rise above one another by several different degrees of perfection.

To return to our statue in the block of marble, we see it sometimes only begun to be chipped; sometimes rough-hewn, and but just sketched into a human figure; sometimes we see the man appearing distinctly in all his limbs and features; sometimes we find the figure wrought up to great elegance; but seldom meet with any to which the hand of a Phidias or a Praxiteles could not give several nice touchings and finishings.

SPECTATOR.

JANUARY THE FOURTEENTH.

Piety the Foundation of Goodness. (A Sunday Lesson.)

PIETY to God is the foundation of good morals, and a disposition particularly graceful and becoming in youth. To be void of it argues a cold heart, destitute of some of the best affections which belong to that age. Youth is the season of warm and generous emotions. ⁴³ The heart should then spontaneously rise into the admiration of what is great, glow with the love of what is fair and excellent, and melt at the discovery of tenderness and goodness.

Where can any object be found so proper to kindle these affections, as the Father of the universe and the Author of all felicity? Unmoved by veneration, can you contemplate that grandeur and majesty which his works every where display? Untouched by gratitude, can you view that profusion of good, which, in this pleasing season of life, his beneficent hand pours around you? Happy in the love and affection of those with whom you are connected, look up to the Supreme Being as the inspirer of all the

friendship that has ever been shown you by others; himself your best and your first friend; formerly the supporter of your infancy, and the guide of your childhood; now the guardian of your youth, and the hope of your coming years. View religious homage as a natural expression of gratitude to him for all his goodness. Consider it as the service of the God of your fathers; of him to whom your parents devoted you; of him whom in former ages your ancestors honoured, and by whom they are now rewarded and blessed in heaven.

Impress your minds with reverence for every thing that is sacred. Let no wantonness of youthful spirits, no compliance with the intemperate mirth of others, ever betray you into profane sallies. Beside the guilt which is thereby incurred, nothing gives a more odious appearance of petulance and presumption to youth, than the affectation of treating religion with levity. Instead of being an evidence of superior understanding, it discovers a pert and shallow mind, which, vain of the first smatterings of knowledge, presumes to make light of what the rest of mankind revere.

At the same time, you are ~~not to~~ imagine that, when exhorted to be religious, you are called upon to become more formal and solemn in your manners than others of the same years, or to erect yourselves into supercilious reprovers of those around you. The spirit of true religion breathes gentleness and affability. It gives a native unaffected ease to behaviour. It is social, kind, and cheerful; far removed from that gloomy and illiberal superstition, which clouds the brow, sharpens the temper, dejects the spirit, and teaches men to fit themselves for another world by neglecting the concerns of this.

Let your religion, ~~on~~ the contrary, connect preparation for heaven with an honourable discharge of the duties of active life. Of such religion discover, on every proper occasion, that you are not ashamed; but avoid making any unnecessary ostentation of it before the world.

HUGH BLAIR.

JANUARY THE FIFTEENTH.

Brief Survey of the Infinite Universe.

WHEN the shades of night have spread their veil over the plains, the firmament manifests to our view its gran-

dear and its riches. The sparkling points with which it is studded, are so many suns suspended by the Almighty in the immensity of space, to the worlds which roll around them.

“The heavens declare the glory of God, and the firmament showeth his handywork.” The royal poet, who expressed himself with such loftiness of sentiment, was not aware that the stars which he contemplated were in reality suns. He anticipated these times; and first sung that majestic hymn which future and more enlightened ages should chaunt forth in praise to the Founder of worlds.

The assemblage of these vast bodies is divided into different systems, the number of which probably surpasses the grains of sand which the sea casts on its shores.

Each system has at its centre of motion, a star, or sun, which shines by its native inherent light; and round which several orders of opaque globes revolve, reflecting, with more or less brilliancy, the light they borrow from it, and which renders them visible.

From what we know of our own system, it may be reasonably concluded, that all the rest are with equal wisdom contrived, situated, and provided with accommodations for rational inhabitants. Let us therefore take a survey of the system to which we belong, the only one accessible to us; and thence we shall be the better enabled to judge of the nature and end of the other systems of the universe.

Those globes which we perceive as wandering among the heavenly host, are the planets. The primary or principal ones have the Sun for the common centre of their periodical revolution; while the others, which are called secondaries, or moons, move round their primaries, accompanying them as satellites in their annual revolution.

The Earth has one satellite, Jupiter four, Saturn seven, and the newly-discovered planet Herschel six; Saturn has besides a luminous and beautiful ring.

We know that our solar system consists of twenty-nine planetary bodies; we are not certain but there may be more. Their number has been considerably augmented to us since the invention of telescopes; and by more perfect instruments, and more accurate observers, may be further increased: the discovery of the planet Herschel may be regarded as a happy presage of future success.

Modern astronomy has not only enriched our heavens with new planets, but has also enlarged the boundaries of the solar system. The Comets, which, from their fallacious appearance, their tail, their beard, the diversity of their directions, and their sudden appearance and disappearance, have been considered as meteors, are found to be a species of planetary bodies: their long routes are now calculated by astronomers, who can foretel their distant return, determine their place, and account for their irregularities. Many of these bodies at present acknowledge the empire of our Sun, though the orbits they trace round him are so extensive, that ages are necessary for the completion of a revolution.

In a word, it is from modern astronomy we learn that the stars are innumerable; and that the constellations, in which the ancients reckoned but a few, are now known to contain thousands. The heavens of Thales and Hipparchus were very poor, when compared to those of later astronomers, of Tycho Brahe, Flamstead, Halley, and Herschel. The diameter of the great orbit which our Earth describes, is more than 190 millions of miles: yet this vast extent vanishes into nothing, and becomes a mere point, when the astronomer wishes to use it as a measure to ascertain the distance of the fixed stars.

How great then must be the real bulk of these luminaries, which are perceptible by us at such an enormous distance. The Sun is about a million times greater than the Earth, and more than 500 times greater than all the planets taken together. If the stars be suns, as we have every reason to suppose, they may either be equal to or exceed it in size.

Proud and ignorant mortal! lift up now thine eyes to heaven, and answer me, If one of those luminaries which adorn the starry heaven, should be taken away, would thy nights become darker? Say not then that the stars are made for thee; that it is for thee that the firmament glitters with effulgent brightness: feeble mortal! thou wast not the sole object of the liberal bounties of the Creator, when he appointed Sirius, and encompassed it with worlds!

BONNET.

Of the Solar System.

WHILST the planets perform their periodical revolutions round the Sun, by which the course of their year is regulated, they turn round their own axes, and so they obtain the alternate succession of day and night.

Our Earth or Globe, which seems so vast in the eyes of the frail beings who inhabit it, and whose diameter is above 7970 miles, is yet nearly a thousand times smaller than Jupiter, which appears to the naked eye as little more than a shining atom.

A rare transparent and elastic substance surrounds the Earth to a certain height. This substance is the air or atmosphere, the habitation of the winds; an immense reservoir of vapours, which, when condensed into clouds, either embellish our sky by the variety of their figures, and the richness of their colouring; or astonish us by the rolling thunder, or flashes of lightning that escape from them: sometimes they melt away; at others are condensed into rain or hail, supplying the deficiencies of the earth with the superfluity of heaven.

The Moon, the nearest of all the planets to the Earth, is likewise that of which we have the most knowledge. Its globe always presents to us the same face, because it turns round upon its axis precisely in the same space of time in which it revolves round the Earth.

It has its phases, or gradual and periodical increase and decrease of light, according to its position in respect to the Sun, which enlightens it, and the Earth, on which it reflects the light that it has received.

The face of the Moon is divided into luminous and obscure parts. The former seem analogous to land, and the latter to resemble our seas.

In the luminous spots there have been observed some parts which are brighter than the rest; these project a shadow, the length of which has been measured, and their track ascertained. These parts are mountains, higher perhaps than ours in proportion to the size of the Moon, the tops of which may be seen gilded by the rays of the sun at the quadratures of the Moon, the light gradually descending to their feet till they appear entirely bright. Some of these mountains stand

by themselves, while in other places there are long chains of them.

Venus has, like the Moon, her phases, spots, and mountains. The telescope discovers to us also spots in Mars and Jupiter. Those in Jupiter form belts; considerable changes have been seen among these, as if of the ocean's overflowing the land, and again leaving it dry, by its retreat.

Mercury, Saturn, and the planet Herschel, are comparatively but little known: the first because he is too near the Sun; the two last, because they are so remote from it.

Lastly, the Sun himself has spots, which seem to move with regularity, and the size of which equals, and very often exceeds, the surface of our globe itself.

Every thing in the universe is systematical; all is combination, affinity, and connection.

From the relations which exist between all parts of the world, and by which they conspire to one general end, results the harmony of the world.

The immutable relations which unite all the worlds to one another, constitute the harmony of the universe.

BONNET.

JANUARY THE SEVENTEENTH.

Necessity of considering both Sides of a Question.

IN the days of knight-errantry and paganism, one of our old British princes set up a statue to the goddess of Victory, in a point where four roads met together. In her right hand she held a spear, and her left hand rested upon a shield; the outside of this shield was of gold, and the inside of silver. On the former was inscribed, in the old British language, "To the goddess ever favourable;" and on the other, "For four victories obtained successively over the Picts and other inhabitants of the northern islands."

It happened one day that two knights completely armed, one in black armour, the other in white, arrived from opposite parts of the country at this statue, just about the same time; and as neither of them had seen it before, they stopped to read the inscription, and observe the excellence of its workmanship.

After contemplating it for some time, This golden shield

24 *Necessity of considering both Sides of a Question.*

says the black knight—Golden shield! cried the white knight (who was as strictly observing the opposite side), why, if I have my eyes, it is silver.—I know nothing of your eyes, replied the black knight; but if ever I saw a golden shield in my life, this is one.—Yes, returned the white knight, smiling, it is very probable, indeed, that they should expose a shield of gold in so public a place as this! for my part, I wonder even a silver one is not too strong a temptation for the devotion of some people who pass this way; and it appears, by the date, that this has been here above three years.

The black knight could not bear the smile with which this was delivered, and grew so warm in the dispute, that it soon ended in a challenge: they both therefore turned their horses, and rode back so far as to have sufficient space for their career; then fixing their spears in their rests, they flew at each other with the greatest fury and impetuosity. Their shock was so rude, and the blow on each side so effectual, that they both fell to the ground, much wounded and bruised; and lay there for some time, as in a trance.

A good Druid, who was travelling that way, found them in this condition. The Druids were the physicians of those times, as well as the priests. He had a sovereign balsam about him, which he had composed himself, for he was very skilful in all the plants that grew in the fields or in the forests: he staunched their blood, applied his balsam to their wounds, and brought them, as it were, from death to life again. As soon as they were sufficiently recovered, he began to inquire into the occasion of their quarrel. Why, this man, cried the black knight will have it that yonder shield is silver.—And he will have it, replied the white knight, that it is gold. And then they told him all the particulars of the affair.

Ah! said the Druid, with a sigh, you are both of you, my brethren, in the right, and both of you in the wrong: nad either of you given himself time to look at the opposite side of the shield, as well as that which first presented itself to view, all this passion and bloodshed might have been avoided: however, there is a very good lesson to be learned from the evils that have befallen you on this occasion. Permit me, therefore, to entreat you by all our gods, and by this goddess of Victory in particular, never to enter into any dispute for the future, till you have fairly considered both sides of the question.

BEAUMONT.

JANUARY THE EIGHTEENTH

Henry I.

HENRY the First was one of the most accomplished princes that have filled the English throne; and possessed all the qualities both of body and mind, natural and acquired, which could fit him for the high station he attained: his person was manly; his countenance engaging; his eyes clear, serene, and penetrating. The affability of his address encouraged those who might be overawed by the sense of his dignity or his wisdom; and though he often indulged his facetious humour, he knew how to temper it with discretion, and ever kept at a distance from all indecent familiarities with his courtiers.

His superior eloquence and judgment would have given him an ascendant, even if he had been born in a private station; and his personal bravery would have procured him respect, even though it had been less supported by art and policy. By his great progress in literature, he acquired the name of *Beau Clerc*, or the Scholar: but his application to sedentary pursuits abated nothing of the activity and vigilance of his government; and though the learning of that age was better fitted to corrupt than improve the understanding, his natural good sense preserved itself untainted both from the pedantry and superstition which were then so prevalent among men of letters.

His temper was very susceptible of the sentiments as well of friendship as resentment; and his ambition, though high, might be esteemed moderate, had not his conduct towards his brother shown, that he was too much disposed to sacrifice to it all the maxims of justice and equity. He died December 1. 1135, aged 67, having reigned 35 years.

Stephen.

England suffered great miseries during the reign of Stephen: but his personal character, allowing for the temerity and injustice of his usurpation, appears not liable to any great exception; and he seems to have been well qualified, had he succeeded by a just title, to have promoted the happiness and prosperity of his subjects.

He was possessed of industry, activity, and courage, to a great degree; was not deficient in ability, had he enjoyed

the talent of gaining men's affections; and, notwithstanding his precarious situation, never indulged himself in the exercise of any cruelty or revenge. His advancement to the throne procured him neither tranquillity nor happiness. Stephen died in the year 1154.

Henry II.

In the 58th year of his age, and thirty-fifth of his reign, died Henry the Second; the greatest prince of his time for wisdom, virtue, and ability; and the most powerful in extent of dominion, of all those that had ever filled the throne of England. His character, both in public and private life, is almost without a blemish; and he seems to have possessed every accomplishment, both of body and mind, which makes a man estimable or amiable.

He was of a middle stature, strong, and well proportioned; his countenance was lively and engaging; his conversation affable and entertaining; his elocution easy, persuasive, and ever at command. He loved peace, but possessed both conduct and bravery in war; was provident without timidity; severe in the execution of justice, without rigour; and temperate without austerity. He preserved health, and kept himself from corpulency, to which he was somewhat inclined, by an abstemious diet, and by frequent exercise, particularly by hunting. When he could enjoy leisure, he recreated himself in learned conversation, or in reading; and he cultivated his natural talents by study, above any prince of his time.

His affections, as well as his enmities, were warm and durable; and his long experience of the ingratitude and infidelity of men, never destroyed the natural sensibility of his temper, which disposed him to friendship and society.

His character has been transmitted to us by many writers, who were his contemporaries; and it resembles extremely, in its most remarkable strokes, that of his maternal grandfather, Henry I.; excepting only that ambition, which was a ruling passion in both, found not in the first Henry such unexceptionable means of exerting itself; and pushed that prince into measures which were both criminal in themselves, and were the cause of further crimes, from which his grandson's conduct was happily exempted. He died in 1189.

HUME.

JANUARY THE NINETEENTH.

A Father's Advice to his Son.

My youth's first hope, my manhood's treasure,
 My dearest innocent, attend,
 Nor fear rebuke, or sour displeasure :
 A father's loveliest name is Friend.

- Some truths from long experience flowing,
 Worth more than royal grants, receive ;
 For truths are wealths of heaven's bestowing,
 Which kings have seldom power to give

Since, from an ancient race descended,
 You boast an unattainted blood,
 By yours be their fair fame attended,
 And claim by birthright — to be good.

In love for every fellow-creature,
 Superior rise above the crowd ;
 What most ennobles human nature,
 Was ne'er the portion of the proud.

Be thine the generous heart that borrows
 From others' joy a friendly glow,
 And for each hapless neighbour's sorrows
 Throbs with a sympathetic woe.

This is the temper most endearing ;
 Though wide proud Pomp her banner spreads,
 An heav'nlier power Good-nature bearing,
 Each heart in willing thralldom leads.

Taste not from Fame's uncertain fountain
 The peace-destroying streams that flow,
 Nor from Ambition's dangerous mountain
 Look down upon the world below

The princely pine on hills exalted,
 Whose lofty branches cleave the sky,
 By winds, long brav'd, at last assaulted,
 Is headlong whirl'd in dust to lie ;

While the mild rose, more safely growing
 Low in its unaspiring vale,
 Amid retirement's shelter blowing,
 Exchanges sweets with every gale.

Wish not for beauty's darling features,
Moulded by nature's partial pow'r;
For fairest forms 'mong human creatures
Shine but the pageants of an hour.

I saw the pride of all the meadow,
At noon, a gay narcissus blow
Upon a river's bank, whose shadow
Bloom'd in the silver waves below;

By noontide's heat it's youth was wasted;
The waters, as they pass'd, complain'd:
At eve, its glories all were blasted,
And not one former tint remain'd.

Nor let vain wit's deceitful glory
Lead you from wisdom's path astray;
What genius lives renown'd in story
To happiness who found the way

In yonder mead behold that vapour,
Whose vivid beams illusive play:
Far off it seems a friendly taper,
To guide the traveller on his way;

But should some hapless wretch, pursuing,
Tread where the treach'rous meteors glow,
He'd find, too late, his rashness rueing,
That fatal quicksands lurk below.

In life such bubbles not admiring,
Gilt with false light, and fill'd with air,
Do you, from pageant crowds retiring,
To peace in virtue's cot repair.

There seek the never-wasted treasure
Which mutual love and friendship give,
Domestic comfort, spotless pleasure,
And blest and blessing you will live

If Heav'n with children crown your dwelling,
As mine its bounty does with you,
In fondness fatherly excelling,
Th' example you have felt pursue.

JANUARY THE TWENTIETH.

The Art of Pleasing.

THE desire of being pleased is universal; the desire of pleasing should be so too. It is included in that great and fundamental principle of morality, of doing to others what we wish they should do to us. There are indeed some moral duties of a much higher nature, but none of a more amiable; and I do not hesitate to place it at the head of the minor virtues.

The manner of conferring favours or benefits is, as to pleasing, almost as important as the matter itself. Take care, then, never to throw away the obligations, which perhaps you may have it in your power to confer upon others, by an air of insolent protection, or by a cold and comfortless manner, which stifles them in their birth. Humanity inclines, religion requires, and our moral duties oblige us, as far as we are able, to relieve the distresses and miseries of our fellow-creatures: but this is not all; for a true heart-felt benevolence and tenderness will prompt us to contribute what we can to their ease, their amusement, and their pleasure, as far as innocently we may. Let us then not only scatter benefits, but even strew flowers, for our fellow-travellers in the rugged ways of this wretched world.

There are some, and but too many in this country particularly, who, without the least visible taint of ill-nature or malevolence, seem to be totally indifferent, and do not show the least desire to please; as, on the other hand, they never designedly offend. Whether this proceeds from a lazy, negligent, and listless disposition, from a gloomy and melancholic nature, from ill health, low spirits, or from a secret and sullen pride, arising from the consciousness of their boasted liberty and independence, is hard to determine, considering the various movements of the human heart, and the wonderful errors of the human head. But, be the cause what it will, that neutrality which is the effect of it, makes these people, as neutralities do, despicable, and mere blanks in society. They would surely be roused from their indifference, if they would seriously consider the infinite utility of pleasing.

The person who manifests a constant desire to please, places his, perhaps small, stock of merit, at great interest

What vast returns then must real merit, when thus adorned, necessarily bring in! A prudent usurer would with transport place his last shilling at such interest, and upon so solid a security.

The man who is amiable will make almost as many friends as he does acquaintances. I mean, in the current acceptation of the word: he will make people in general wish him well, and inclined to serve him in any thing not inconsistent with their own interest.

Civility is the essential article toward pleasing, and is the result of good-nature and good-sense: but good-breeding is the decoration, the lustre of civility, and only to be acquired by a minute attention to good company. A good-natured ploughman or fox-hunter may be intentionally as civil as the politest courtier; but his manner often degrades and vilifies the matter; whereas, in good-breeding, the manner always adorns and dignifies the matter to such a degree, that I have often known it give currency to base coin.

Civility is often attended by a ceremoniousness, which good-breeding corrects, but will not quite abolish. A certain degree of ceremony is a necessary outwork of manners, as well as of religion: it keeps the forward and petulant at a proper distance, and is a very small restraint to the sensible and to the well-bred part of the world.

CHESTERFIELD.

JANUARY THE TWENTY-FIRST.

Superiority of the Sacred Writings. (A Sunday Lesson.)

THE holy books which have preserved religion to our times, contain the first records of the origin of things. They are more ancient than all the fabulous productions of the human mind, which have since in so melancholy a manner amused the credulity of the following ages. It is in the principal actions of this divine history that the fables of paganism find their foundation; so that there is no error which pays not homage to the antiquity and authority of the sacred writings.

The sincerity of Moses appears in the simplicity of his history. He used no precautions to gain credit, because he supposes those for whom he wrote were not destitute of faith, and because he relates none but facts which were

publicly known; to preserve the memory of them rather among their descendants, than to instruct that generation in the nature of them. He conceals not in a mysterious manner the holy books from the people, lest they should discover the falsehood of them; while the vain oracles of the sybils were laid up with care in the capitol, exposed to the eyes of the priest alone, and produced from time to time by fragments, to justify to the minds of the people either a dangerous enterprise or an unjust war. But our prophetic books were daily read by a whole people: young and old, women and children, priests and the common people, kings and subjects, were found without ceasing to have them in their hands; every one had a right there to study his duty, and to discover his hopes.

Far from flattering the pride of that generation, the holy books declared fully the ingratitude of their fathers; they announced in every page their misfortunes to be the just chastisement of their crimes; they reproached kings with their incontinence, priests with their injustice, the great with their profusion, and the people with their inconstancy and infidelity: and by the oracles which were seen there to be accomplished every day, they waited with confidence the fulfilment of those of which all the world are at this day the witnesses.

There is a nobleness and an elevation in the maxims of the Gospel, to which mean and grovelling minds cannot attain. The religion which forms great souls, appears to be made only for them: and in order to be great, or to become so, there is a necessity of being a Christian.

MASSILLON.

JANUARY THE TWENTY-SECOND.

Description of the Laplanders.

Who can be without a lively sense of gratitude toward his Creator, and of pity to those of his fellow-creatures to whom Nature has more sparingly distributed her blessings, when he fixes his eyes on the Laplanders, and the inhabitants of the lands bordering on the arctic pole?

Their country is formed of a chain of mountains covered with snow and ice, which does not melt even in summer; and where the chain is interrupted, bogs and marshes fill the space. Winter is felt during the greater part of the

year : a deep snow overwhelms the valleys, and covers the little hills ; and for a long time the sun never rises above their horizon. The inhabitants seek shelter from the cold in tents, which can be removed from one place to another.

They fix their fire-place in the middle of the tent, and surround it with stones. The smoke goes out at a hole in the top, which also serves them for a window. There they fasten iron chains, to which they hang the caldrons in which they dress their food, and melt the ice which serves them for drink. The inside of the tent is furnished with furs, which preserve them from the cold ; and they lie on skins of animals, spread upon the ground.

It is in such habitations that the Laplanders pass their winter, surrounded by the howling wolves, who are roaming every where in search of prey. How could we bear the climate and way of life of these people ? How much we should think ourselves to be pitied, if we had nothing before our eyes but an immense extent of ice, and whole deserts covered with snow ; the absence of the sun making the cold still more insupportable !—and if, instead of a convenient dwelling, we had only moveable tents made of skins ; and no other resource for our subsistence but in painful and dangerous hunting.

Are not these reflections proper to make us observe the many advantages of our climate, to which we attend so little ? Ought they not to animate us to bless the divine Providence for the many thousand advantages we enjoy ? Yes, let us ever bless that wise Providence ; and when we feel the severity of the season, let us return thanks, that the cold is so moderate where we dwell, and that we have such numerous ways of guarding against it.

But is the inhabitant of northern countries so unhappy as we imagine ? It is true, that he wanders painfully through rough valleys and unbeaten roads, and that he is exposed to the inclemency of the seasons. But his hardy body is able to bear fatigue. If the Laplander be poor, and deprived of many of the conveniences of life that we enjoy ; is he not rich, in knowing no other wants than those which he can easily satisfy ?

He is deprived for several months of the light of the sun ; but in return the moon and the aurora borealis come to illuminate his horizon. Even the snow and ice, in which he is buried, do not make him unhappy. Education and custom arm him against the severity of his climate. The

hardy life he leads, enables him to brave the cold ; and the particular wants which are indispensable to him, Nature has made it easy for him to supply. She has pointed out to him animals, the fur of which defends him from the keenness of the air. She has given him the rein-deer, which furnishes him with his tent, his dress, his bed, and his food : with this animal he undertakes long journeys, it supplies almost all his wants, and the maintenance of it is no expense or trouble to him.

If it be true, then, that the idea we form of happiness depends more on opinion than on reason : if it be true, also, that real happiness is not fixed to particular people, or particular climates ; and that, with the necessities of life and peace of mind, a man may be happy in any corner of the earth : have we not a right to ask, what the Laplander wants to make him happy ?

STURM.

JANUARY THE TWENTY-THIRD.

The great Earthquake at Lisbon, in 1755.

NEVER was a finer morning seen than the 1st of November, 1755. The sun shone in his full lustre, and the whole face of the sky was perfectly serene and clear. Not the least signal or warning was afforded of that approaching event, which, in a few minutes, rendered the flourishing, opulent, and populous city of Lisbon, a scene of general horror and desolation.

On the morning of that fatal day, between the hours of nine and ten, I was, says the writer, sitting in my apartment, and had just finished a letter, when the table I was writing on began to tremble with a gentle motion ; which surprised me, as I could not perceive a breath of wind stirring. Whilst I was reflecting on what could be the cause, the whole house began to shake from the very foundation, which at first I imputed to the rattling of coaches in the streets ; but on listening more attentively, I found it was owing to a frightful noise under-ground, resembling the rumbling of distant thunder. All this passed in less than a minute. I now began to be alarmed, as it occurred to me, that the noise might possibly be the presage of an approaching earthquake.

I threw down my pen, and started up on my feet, remaining for a moment in suspense, whether I should stay in the apartment, or run into the street ; but in a moment

I was roused from my dream, being stunned with a most horrid crash, as though every edifice in the city had tumbled down at once. The house I was in shook with such violence, that the upper stories immediately fell in; and though my apartment (which was the first floor) did not immediately share the same fate, yet every thing was thrown out of its place, and it was with difficulty I kept my feet.

I expected nothing less than to be crushed to death; as the walls continued rocking to and fro in the most frightful manner, and opening in several places: large stones fell down on every side from the cracks, and the ends of most of the rafters started at the same time from the wall. The sky in a moment became so gloomy that I could distinguish no particular object. It was an Egyptian darkness, such as might be felt; owing to the prodigious clouds of dust and lime, raised from so violent a concussion, and from the overthrow of so many buildings, and, as some reported, from sulphurous exhalations. However, it is certain that I found myself almost choked for nearly ten minutes.

As soon as the gloom began to disperse, and the violence of the shock to abate, the first object I perceived in my room was a woman sitting on the floor, with an infant in her arms, covered with dust, pale and trembling. I asked her how she came there; but her consternation was so great that she could give me no account. She asked me, in the utmost agony, if I did not think the world was at an end: at the same time she complained of being choked, and begged I would procure her a little drink. I told her she must not think of quenching her thirst, but of saving her life; as the house was just falling on our heads, and a second shock would certainly bury us.

I hurried down stairs, the woman with me, holding by my arm, and made directly to that end of the street which opens to the river Tagus: but finding the passage entirely blocked up by the fallen houses, I turned back; having helped the woman over a vast heap of ruins, with no small hazard to my own life. Just as we were going into the street, there was one part which I could not climb over without the assistance of my hands as well as feet: I therefore desired her to let go her hold, which she did, remaining two or three feet behind me; and at this moment there fell a vast stone from a tottering wall, and crushed both her and the child in pieces!

JANUARY THE TWENTY-FOURTH

The Earthquake at Lisbon, continued.

I HAD now a long narrow street to pass, in which the houses on each side were four or five stories high, all very old; and the greater part already thrown down, or continually falling, and threatening the passengers with death at every step; numbers of whom lay killed before me, or, what was more deplorable, so bruised and wounded, that they could not move so as to escape the destruction which impended over them.

As self-preservation, however, is the first law of nature, I proceeded on as fast as I could: and having got clear of the narrow street, I found myself in safety in the large open space before St. Paul's church, which had been thrown down a few minutes before, and had buried a great part of a numerous congregation! Here I stood some time, considering what I should do; but not thinking myself safe, I climbed over the ruins of the west end of the church, to get to the river-side; that I might be removed as far as possible from the tottering houses, in the dreaded event of a second shock.

This with some difficulty I accomplished; and by the river-side I found a prodigious concourse of both sexes, and of all ranks and conditions. All these, whom their mutual dangers had here assembled as to a place of safety, were on their knees at prayers, with the terrors of death in their countenances; every one striking his breast, and crying out incessantly to Heaven for mercy and protection.

In the midst of our devotions, the second great shock came with little less violence than the first; and it completed the ruin of those buildings which had already been much shattered. The consternation now became so universal, that shrieks and cries could be distinctly heard from a considerable distance: at the same time we heard the fall of the parish-church, whereby many were killed on the spot. The force of this shock was so great, that I could scarcely support myself on my knees; and it was attended with some circumstances still more dreadful than the former.

On a sudden I heard a general cry, 'The sea is coming in; we shall all be lost.' Upon this, turning my eyes towards the river Tagus, which in that place is nearly four miles broad, I perceived it heaving and swelling in a most unaccountable manner, for no wind was stirring. In

an instant there appeared, at a small distance, a large body of water, rising like a mountain. It approached foaming and roaring; and rushed toward the shore with such rapidity, that we all ran for our lives as fast as possible. Many were actually swept away; for my own part I had a narrow escape; and should certainly have been lost, had I not grasped a large beam that lay on the ground, till the water returned again to its channel, which it did almost at the same instant with equal rapidity.

JANUARY THE TWENTY-FIFTH.

The Earthquake at Lisbon, concluded.

As there now appeared at least as much danger from the sea as the land, I scarcely knew whither to retire for safety: I therefore took a sudden resolution to return back to the area of St. Paul's. Here I stood some time, and observed the ships tumbling and tossing about, as in a violent storm. Some had broken their cables, and were carried to the other side of the Tagus: others were whirled round with incredible swiftness: several large boats were turned keel upwards: and all this without any wind. It was at this moment, that the new quay, built of rough marble, was entirely swallowed up, with all the people on it, who had fled there for safety, and had reason to consider themselves out of danger. At the same time a great number of boats and small vessels, which were anchored near it, all full of people (who had retired to them for the same purpose) were all swallowed up as in a whirlpool, and never more appeared.

I did not see this last dreadful incident with my own eyes, as it occurred a quarter of a mile from the spot where I was: but I had the account from several masters of ships, who were anchored near the quay, and who saw the whole catastrophe. One of them informed me, that during the second shock he perceived the whole city waving backward and forward, like the sea when the wind first begins to rise; and that the agitation of the earth was so great, even under the river, that it threw up his large anchor from the mooring, which seemed to swim on the surface of the water. that immediately on this extraordinary concussion, the river rose at once near twenty feet, and in a moment subsided: at which instant he saw the quay, with the immense concourse of people upon it, sink

down; and at the same time the boats and vessels that were near it were also drawn into the cavity, which instantly closed, inasmuch as no sign of a wreck was ever afterwards seen. I went myself in a few days, but could not find even the ruins of a place where I had taken so many agreeable walks: I found it all deep water, and in some parts so deep as scarcely to be fathomed.

I had not been long in the area of St. Paul's church-yard, when I felt the third shock; at which, though less violent than the two former, the sea rushed in again, but retired in like manner. I took notice that the waters retired so impetuously, as to leave some vessels quite dry, which rode in seven fathom water.

Perhaps you may think the subject concluded; but, alas! the horrors of this day are sufficient to fill a volume. As soon as it grew dark, in the evening another scene presented itself, little less shocking than those already described. The whole city appeared in a blaze, so bright that I could see to read. It was, without exaggeration, on fire in a hundred different places at once; and it continued burning for six days together, without intermission, or without the least attempt being made to stop its progress, such were the distress and consternation of the survivors.

I could never learn that this terrible fire was owing to any subterraneous eruption. The 1st of November being All Saints' day, every altar and every church and chapel (some of them having more than twenty) was illuminated with a number of wax-tapers and lamps; which setting fire to the curtains and timber-work that fell with the shock, the conflagration soon spread to the neighbouring houses. The fire, in consequence, destroyed the whole city, at least every thing that was grand or valuable.

The number of persons that perished, including those who were burnt, or who were afterwards crushed to death while digging in the ruins, is supposed, on the lowest calculation, to have amounted to more than sixty thousand. This extensive and opulent city is now nothing but a vast heap of ruins; the rich and poor are at present upon a level; and some thousands of families who but the day before had been easy in their circumstances, were this day scattered in the fields, in want of every convenience, while none were able to relieve them.

Richard I.

THE most shining part of Richard's character was his military talents; no man, even in that romantic age, carried courage and intrepidity to a greater height; and this quality gained him the appellation of Lion-hearted, *Cœur de Lion*. He passionately loved glory; and as his conduct in the field was not inferior to his valour, he seems to have possessed every talent necessary for acquiring it.

His resentments also were high; his pride unconquerable; and his subjects, as well as his neighbours, had therefore reason to apprehend, from the continuance of his reign, a perpetual scene of blood and violence. Of an impetuous and vehement spirit, he was distinguished by all the good as well as the bad qualities which are incident to that character. He was open, frank, generous, sincere, and brave; he was revengeful, domineering, ambitious, haughty, and cruel; and was thus better calculated to dazzle men by the splendour of his enterprises, than to promote either their happiness or his own grandeur by a sound and well-regulated policy.

As military talents make great impression on the people, he seems to have been much beloved by his English subjects; and he is remarked to have been the first prince of the Norman line who bore any regard to them. He passed, however, only four months of his reign in that kingdom: the crusade employed him near three years: he was detained about four months in captivity the rest of his reign was spent either in war, or preparations for war, against France: and he was so pleased with the fame which he had acquired in the East, that he seemed determined, notwithstanding all his past misfortunes, to have further exhausted his kingdom, and to have exposed himself to new hazards, by conducting another expedition against the infidels. He died April 6. 1199, aged 42, having reigned ten years.

John.

The character of John is nothing but a complication of vices equally mean and odious, ruinous to himself, and destructive to his people: cowardice, inactivity, folly, levity, wantonness, ingratitude, treachery, tyranny, and cruelty; these qualities too evidently appear in the several incidents of his life, to give us room to suspect, that the dis-

agreeable picture has been anywise overcharged by the prejudices of the ancient historians.

It is hard to say, whether his conduct to his father, his brother, his nephew, or his subjects, was most culpable; or whether his crimes in these respects were not even exceeded by the baseness which appeared in his transactions with the king of France, the pope, and the barons.

His dominions, when they devolved to him by the death of his brother, were more extensive than have ever since his time been ruled by an English monarch. But he first lost by his misconduct the flourishing provinces in France, the ancient patrimony of his family: he subjected his kingdom to a shameful vassalage under the see of Rome: he saw the prerogatives of his crown diminished by law, and still more reduced by faction: and he died at last when in danger of being totally expelled by a foreign power; and of either ending his life miserably in a prison, or seeking shelter as a fugitive from the pursuit of his enemies.

The prejudices against this prince were so violent, that he was believed to have sent an embassy to the emperor of Morocco, and to have offered to change his religion and become Mohammedan, in order to purchase the protection of that monarch. But though the story is told us on plausible authority, it is in itself utterly improbable; except that there is nothing so incredible but may be believed to proceed from the folly and wickedness of John. He died in 1216, and was buried at Worcester. HUME.

JANUARY THE TWENTY-SEVENTH.

Instructions for writing Letters.

I OBSERVE that in your letter to me, you spell *induce*, *enduce*; and *grandeur*, you spell *grandure*; two faults, of which few of my house-maids would have been guilty. I must tell you, that orthography, in the true sense of the word, is so absolutely necessary for a man of letters, or a gentleman, that one false spelling may fix a ridicule upon him for the rest of his life; and I know a man of quality who never recovered the ridicule of having spelled *wholesome* without the *w*.

Reading with care will secure every body from false spelling; for books are always well spelled, according to the orthography of the times. Some words are indeed doubtful, being spelled differently by different authors of

equal authority: but these are few; and in such cases every man has his option, because he may plead his authority either way: but where there is only one right way, as in the two words above-mentioned, it is unpardonable and ridiculous to miss it.

Our pronouns and relatives often create obscurity or ambiguity; be therefore extremely attentive to them, and take care to mark out with precision their particular relations. For example: Mr. Johnson acquainted me that he had seen Mr. Smith, who had promised him to speak to Mr. Clarke, to return *him* (Mr. Johnson) those papers which *he* (Mr. Smith) had left some time ago with *him* (Mr. Clarke.) It is better to repeat a name, though unnecessarily, ten times, than to have the person mistaken once. *Who*, you know, is only relative to persons, and cannot be applied to things; *which*, and *that*, are chiefly relative to things, but not absolutely exclusive of persons: for one may say, The man *that* robbed or killed such-a-one; but it is much better to say, the man *who* robbed or killed. One never says, The man or the woman *which*. *Which* and *that*, though chiefly relative to things, cannot be always used indifferently as to things; and a consideration of what is most agreeable in the sound must sometimes determine their place. For instance; The letter *which* I received from you, *which* you referred to in your last, *which* came by lord Albemarle's messenger, and *which* I showed to such-a-one: I would change it thus — The letter *that* I received from you, *which* you referred to in your last, *that* came by lord Albemarle's messenger, and *which* I showed to such-a-one.*

I wish too that your hand-writing was much better; and I cannot conceive why it is not, since every man certainly may write whatever hand he pleases. Neatness in folding up, sealing, and directing your letters, is by no means to be neglected; though, I dare say, you think it is. But there is something in the exterior, even of a letter, that may please or displease, and is consequently worth some attention.

CHESTERFIELD.

* I have enlarged on these instances and instructions in my Models of Letters of Young Persons.

JANUARY THE TWENTY-EIGHTH.

Friendship recorded in the Scriptures. (A Sunday Lesson.)

ONE of the strongest and most affecting instances of a faithful attachment to be met with in history, occurs in the friendship which subsisted between two females. The instance alluded to is recorded in the Jewish annals, and most pathetically related by one of the sacred penmen. This is the friendship of Naomi and Ruth.

Two very remarkable instances of friendship occur in the history of our Saviour's life: it may not perhaps be altogether unnecessary to state them in all their striking circumstances.

The evangelist, in relating the miracles which Christ performed at Bethany, by restoring a person to life who had lain some days in the grave, introduces this narrative by emphatically observing, that "Jesus loved Lazarus;" intimating, it should seem, that the sentiments which Christ entertained of Lazarus were a distinct and peculiar species of that general benevolence with which he was actuated toward mankind.

Agreeably to this explication of the sacred historian's meaning, when the sisters of Lazarus sent to acquaint Jesus with the state in which their brother lay, they did not even mention his name, but pointed him out by a more honourable and equally notorious designation; the terms of their message were, "Behold, he whom thou lovest is sick!" Accordingly, when he informed his disciples of the notice he had thus received, his expression is, "Our friend Lazarus sleepeth."

Now that Christ did not upon this occasion use the word *friend* in its loose undistinguishing acceptation, but in a restrained and strictly appropriated sense, is not only manifest from this plain account of the fact itself, but appears further evident from the sequel. For, as he was advancing to the grave, accompanied with the relations of the deceased, he discovered the same emotions of grief as swelled the bosom of those with whom Lazarus had been most intimately connected; and, sympathising with their common sorrow, he melted into tears. This circumstance was too remarkable to escape particular observation; and it drew from the spectators, what we should think it must necessarily draw from every reader, this natural and obvious reflection, "Behold, how he loved him!"

In the concluding catastrophe of our Saviour's life, he gave a still more decisive proof, that sentiments of the

strongest personal attachment and friendship were not unworthy of being admitted into his sacred bosom. They were too deeply impressed, indeed, to be extinguished even by the most excruciating torments. In those dreadful moments, observing, among the afflicted witnesses of his painful and ignominious sufferings, that faithful follower who is described by the historian as "the disciple whom he loved," he distinguished him by the most convincing instance of superior confidence, esteem, and affection, that ever was exhibited to the admiration of mankind. For, under circumstances of the most agonizing torments, when it might be thought impossible for human nature to retain any other sensibility but that of its own inexpressible sufferings, he recommended to the care and protection of this his tried and approved friend, in terms of peculiar regard and endearment, the most tender and sacred object of his private affections.

But no language can represent this pathetic and affecting scene, with a force and energy equal to the sublime simplicity of the evangelist's own narrative: "Now there stood by the cross of Jesus, his mother, and his mother's sister, and Mary Magdalene. When Jesus saw his mother, and the disciple by, whom he loved; he saith to his mother, Behold thy son! Then he saith to the disciple, Behold thy mother! and from that hour that disciple took her to his own home."

MELMOTH.

JANUARY THE TWENTY-NINTH

The Different Stages of Life.

HE who, in his youth, improves his intellectual powers in the search of truth and useful knowledge, and refines and strengthens his moral and active powers by the love of virtue for the service of his friends, his country, and mankind; who is animated by true glory, exalted by sacred friendship for social, and softened by virtuous love for domestic life; who lays his heart open to every other mild and generous affection; and who to all these adds a sober, masculine piety, equally remote from superstition and enthusiasm: that man enjoys the most agreeable youth, and lays in the richest fund for the honourable action and happy enjoyment of the succeeding periods of life.

He who, in manhood, keeps the defensive and private

passions under the wisest restraint; who forms the most select and virtuous friendships; who seeks after fame, wealth, and power, in the road of truth and virtue, and, if he cannot find them in that road, generously despises them; who, in his private character and connections, gives fullest scope to the tender and manly passions, and in his public character and connections serves his country and mankind in the most upright and disinterested manner who, in fine, enjoys the goods of life with the greatest moderation, bears its ills with the greatest fortitude, and in those various circumstances of duty and trial maintains and expresses an habitual and supreme reverence and love of God: that man is the worthiest character in this stage of life; passes through it with the highest satisfaction and dignity, and paves the way to the most easy and honourable old age.

Finally, he who, in the decline of life, preserves himself most exempt from the chagrins incident to that period; cherishes the most equal and kind affections; uses his experience, wisdom, and authority, in the most fatherly and venerable manner; acts under a sense of the inspection, and with a view to the approbation of his Maker; is daily aspiring after immortality, and ripening apace for it; and, having sustained his part with integrity and consistency to the last, quits the stage with a modest and graceful triumph: this is the best, this is the happiest old man.

Therefore that whole life of youth, manhood, and old age, which is spent after this manner, is the best and the happiest life.

FORDYCE.

JANUARY THE THIRTIETH.

Necessity of preserving Order.

THROUGHOUT your affairs, your time, your expense, your amusements, your society, the principle of order must be equally carried, if you expect to reap any of its happy fruits. For, if into any one of these great departments of life you suffer disorder to enter, it will spread through all the rest. In vain, for instance, you purpose to be orderly in the conduct of your affairs, if you be irregular in the distribution of your time. In vain you attempt to regulate your expense, if into your amusements, or your society, disorder have crept. You have admitted a principle of confusion, which will defeat all your plans, and perplex and entangle what you sought

to arrange. Uniformity is above all things necessary to order. If you desire that any thing should proceed according to method and rule, "let all things be done in order."

I must also admonish you, that in small as well as in great affairs, a due regard to order is requisite. I mean not that you ought to look on those minute attentions which are apt to occupy frivolous minds, as connected either with virtue or wisdom: but I exhort you to remember, that disorder, like other immoralities, frequently takes rise from inconsiderable beginnings. They who are totally negligent of rule in the little transactions of life, will be in hazard of extending that negligence by degrees to such affairs and duties as will render them criminal. Remissness grows on all who study not to guard against it; and it is only by frequent exercise that the habits of order and punctuality can be thoroughly confirmed.

By attending to order, you avoid idleness, that most fruitful source of crimes and evils. Acting upon a plan, meeting every thing in its own place, you constantly find innocent and useful employment for time. You are never at a loss how to dispose of your hours, or to fill up life agreeably.

In the course of human action, there are two extremes equally dangerous to virtue; the multiplicity of affairs, and the total want of them. The man of order stands in the middle between these two extremes, and suffers from neither: he is occupied, but not oppressed; whereas the disorderly, overloading one part of time, and leaving another vacant, are at one period overwhelmed with business, and at another either idle through want of employment, or indolent through perplexity. Those seasons of indolence and idleness, which recur so often in their life, are their most dangerous moments. The mind, unhappy in its situation, and clinging to every object which can occupy or amuse it, is then aptest to throw itself into the arms of every vice and folly.

Further, by the preservation of order you check inconstancy and levity. Fickle by nature is the human heart. It is fond of change, and perpetually tends to start aside from the straight line of conduct. Hence arises the propriety of bringing ourselves under subjection to method and rule, which, though at first it may prove constraining, yet by degrees, and from the experience of its happy effects, becomes natural and agreeable. It rectifies those irregularities of temper and manners, to which we give

the name of caprice; and which are distinguished characteristics of a disorderly mind. It is the parent of steadiness of conduct, and forms consistency of character. It is the ground of all the confidence we repose in one another; for the disorderly we know not where to find. In him only can we place any trust, who is uniform and regular; who lives by principle, not by humour; who acts upon a plan, and not by desultory motions. BLAIR.

JANUARY THE THIRTY-FIRST.

The Industry of Demosthenes.

DEMOSTHENES was extremely affected by the honours which he saw paid to the orator Callistratus, still more by his supreme power of eloquence over the minds of men; and not being able to resist its charms, he gave himself up to it. Thenceforth he renounced all other studies and pleasures; and during the continuance of Callistratus at Athens he never quitted him, but made all the improvement he could from his precepts.

The first essay of his eloquence was against his guardians, whom he obliged to refund a part of his fortune. Encouraged by this success, he ventured to speak before the people, but with very ill success. He had a weak voice, a thick way of speaking, and a very short breath: notwithstanding which his periods were so long, that he was often obliged to stop in the midst of them to take breath. This occasioned his being hissed by the whole audience.

As he withdrew, hanging down his head, and in the utmost confusion, Satyrus, one of the most excellent actors of those times, who was his friend, met him; and having learnt from himself the cause of his being so much dejected, he assured him that the evil was not without remedy, and that the case was not so desperate as he imagined. He desired him to repeat some of the verses of Sophocles or Euripides to him; which he accordingly did. Satyrus spoke them after him, and gave them such graces, by the tone, gesture, and spirit, with which he pronounced them, that Demosthenes himself found them quite different from what they were in his own manner of speaking. He perceived plainly what he wanted, and applied himself to the acquiring of it.

His efforts to correct his natural defect of utterance, and to perfect himself in pronunciation, of which his friend had made him understand the value, seem almost incredible, and prove that an industrious perseverance can surmount all things. His speech was so defective, that he could not pronounce some letters; among others, that with which the name of the art he studied begins; and he was so short-breathed, that he could not utter a whole period without stopping. At length, he overcame these obstacles by putting small pebbles into his mouth, and pronouncing several verses in this manner without interruption; and by walking and going up steep and difficult places; so that at last no letter made him hesitate, and his breath held out through the longest periods. He went also to the sea-side; and while the waves were in the most violent agitation, he pronounced harangues, to accustom himself, by the confused noise of the waters, to the roar of the people, and the tumultuous cries of public assemblies.

Demosthenes took no less care of his action than his voice. He had a large looking-glass in his house, which served to teach him gesture, and at which he used to declaim, before he spoke in public. To correct a fault, which he had contracted by an ill habit of shrugging up his shoulders, he practised standing upright in a kind of very narrow pulpit, or rostrum, over which hung a halbert, in such a manner, that if in the heat of the action that motion escaped him, the point of the weapon might serve at once to admonish and correct him.

His application to study was no less surprising. To be the more removed from noise, and less subject to distraction, he caused a small room to be made for him underground, in which he shut himself up sometimes for whole months, shaving on purpose half his head and face, that he might not be in a condition to go abroad. It was there, by the light of a small lamp, he composed the admirable Orations, which were said, by those who envied him, to smell of the oil,—to imply that they were too elaborate. It is plain, replied he, yours did not cost you so much trouble.

He always rose very early in the morning, and used to say, that he was sorry when any workman was at his business before him. We may further judge of his extraordinary efforts to acquire an excellence of every kind, from the pains he took in copying Thucydides eight times with his own hand, in order to render the style of that great man familiar to him.

FEBRUARY THE FIRST.

The Month of February

Now shifting gales with milder influence blow,
 Cloud o'er the skies, and melt the falling snow;
 The soften'd soil with fertile moisture teems,
 And, freed from icy bonds, down rush the swelling streams.

THE earlier part of this month may still be reckoned winter; though the cold generally begins to abate. The days are sensibly lengthened; and the sun has power enough gradually to melt away the snow and ice. Sometimes a sudden thaw comes on, with a south wind, and rain, which at once dissolves the snow. Torrents of water then descend from the hills; every little brook and rill is swelled to a large stream; and the ice is swept away with great violence from the rivers. The frost, however, returns for a time; fresh snow falls, often in great quantities; and thus the weather alternately changes during most part of this month.

Various signs of returning spring occur at different times in February. The woodlark, one of the earliest and sweetest of our songsters, often begins his note at the very entrance of the month. Not long after rooks begin to pair, and geese to lay. The thrush and chaffinch then add to the early music of the groves.

Moles go to work in throwing up their hillocks as soon as the earth is softened.—Under some of the largest, a little below the surface of the earth, they make their nests of moss, in which four or five young are found at a time. These animals live on worms, insects, and the roots of plants. They do much mischief in gardens, by loosening and devouring flower-roots; but in the fields they do no other damage than rendering the surface of the ground unequal by their hillocks, which obstruct the sithe in mowing. They are said also to pierce the sides of dams and canals, and let out the water: but this can only be an accidental occurrence, attended with their own destruction.

Many plants emerge from under ground in February, but few flowers yet adorn the fields or gardens. Snow-drops in general are fully opened from the beginning of the month, often peeping from the midst of the snow;

Already now the snow-drop dares appear,
 The first pale blossom of th' unripen'd year;

As Flora's breath, by some transforming power,
 Had chang'd an icicle into a flower,
 Its name and hue the scentless plant retains,
 And winter lingers in its icy veins.

The alder-tree discloses its flower-buds; the catkins of the hazel become very conspicuous in the hedges; and young leaves appear on the gooseberry and currant bushes. The farmer is impatient to begin his work in the fields, as soon as the ground is sufficiently thawed. He ploughs up his fallows; sows beans and pease, rye and spring wheat, sets early potatoes; drains his wet land; dresses and repairs hedges; lops trees, and plants those kinds which love a wet soil, as poplars and willows. AIKIN.

FEBRUARY THE SECOND.

Henry III.

THE most obvious circumstances of Henry the Third's character is his incapacity for government, which rendered him as much a prisoner in the hands of his own ministers and favourites, and as little at his own disposal, as when detained a captive in the hands of his enemies.

From this source, rather than from insincerity and treachery, arose his negligence in observing his promises; and he was too easily induced, for the sake of present convenience, to sacrifice the lasting advantages arising from the trust and confidence of his people. Hence were derived his profusion to favourites, his attachment to strangers, the variableness of his conduct, his hasty resentments, and his sudden forgiveness and return of affection. 'Instead of reducing the dangerous power of his nobles, by obliging them to observe the laws toward their inferiors, and setting them the salutary example in his own government, he was seduced to imitate their conduct, and to make his arbitrary will, or rather that of his ministers, the rule of his actions.

Instead of accommodating himself, by a strict frugality, to the embarrassed situation in which his revenue had been left by the military expedition of his uncle, the dissipations of his father, and the usurpations of the barons; he was tempted to levy money by irregular exactions, which, without enriching himself, impoverished, or at least disgusted, his people.

Of all men, Nature seemed least to have fitted him for a

tyrant : yet are there instances of oppression in his reign, which, though derived from the precedents left him by his predecessors, had been carefully guarded against by the Great Charter, and are inconsistent with all rules of good government ; and, on the whole, we may say, that greater abilities, with his good dispositions, would have prevented him from falling into his faults ; or, with worse dispositions, would have enabled him to maintain and defend them. He died November 16. 1272, aged 64 ; having reigned 56 years.

Edward I.

THE enterprises finished by Edward I., and the projects which he formed, and brought very near to a conclusion, were more prudent and more regularly conducted, and more advantageous to the solid interest of this kingdom, than those which were undertaken in any reign, either of his ancestors or successors. He restored authority to the government, disordered by the weakness of his father ; he maintained the laws against all the efforts of his turbulent barons ; he fully annexed to the crown the principality of Wales ; he took the wisest and most effectual measures for reducing Scotland to a like condition ; and though the equity of the latter enterprise may reasonably be questioned, the circumstances of the two kingdoms promised such success, and the advantage was so visible, of uniting the whole island under one head, that those who give great indulgence to reasons of state in the measures of princes, will not be apt to regard this part of his conduct with much severity.

But Edward, however exceptionable his character may appear on the head of justice, is the model of a politic and warlike king. He possessed industry, penetration, courage, vigour, and enterprise. He was frugal in all expenses that were not necessary ; he knew how to open the public treasures on proper occasions ; he punished criminals with severity ; he was gracious and affable to his servants and courtiers ; and being of a majestic figure, expert at all bodily exercises, and in the main well-proportioned in his limbs, notwithstanding the great length of his legs, he was as well qualified to captivate the populace by his exterior appearance, as to gain the approbation of men of sense by his more solid virtues. He died July 7. 1307, aged 69 ; having reigned 35 years. HUME.

Phenomena of Winter in the Polar Regions.

WINTER, in our temperate regions, exhibits very few phenomena in comparison with what is visible in the arctic circle. The poet Thomson, therefore, has judiciously enriched his noble conclusion of *the Seasons* with all the circumstances of picturesque beauty, to terrific grandeur, that could be borrowed from scenes far remote from us. The famished troops of wolves pouring from the Alps; the mountains of snow rolling down the precipices of the same country; the dreary plains over which the Laplander urges his rein-deer; the wonders of the icy sea; and volcanoes flaming through a waste of snow, are objects selected with the greatest propriety from all that Nature presents most singular and striking in the various domains of boreal cold and desolation.

As we advance into the arctic regions, we find them distinguished by more beautiful appearances of that phenomenon which we call the *aurora borealis*. In Shetland these northern lights, which the natives call *merry-dancers*, a name by which they are known to the common people even in the south of England, are the constant attendants of the clear evenings, and prove a great relief amid the gloom of the long winter nights. They commonly appear at twilight, near the horizon, of a dun colour, approaching to yellow; sometimes continuing in that state for several hours, without any apparent motion; after which they break out into streams of stronger light, spreading into columns, altering into ten thousand different shapes, varying their colours from all the tints of yellow to the most obscure russet, and sometimes becoming on a sudden extinct. We, who see only the extremities of this northern phenomenon, can form but a faint idea of its splendour and its coruscations.

In Siberia there is one species of the *aurora borealis*, which regularly appears between the north-east and east, like a luminous rainbow with numberless colours of light radiating from it. Beneath the arch is a veil of darkness, through which the stars appear with some brilliancy. — There is another kind, which begins with certain insulated rays from the north, and others from the north-east: these augment by degrees, till they fill the whole concavity of the sky, and form an assemblage of colours inconceivably rich and magnificent: but the attendant circumstances strike the beholders with horror; for they

crackle, sparkle, hiss, make a whistling sound, and a noise even equal to that of artificial fire-works. The idea of an electrical cause is strongly impressed by these circumstances. The natives on this occasion say it is a troop of men in the clouds furiously mad, who are passing by. Every animal is struck with fear. Even the dogs of the hunters are seized with such dread, that they will fall on the ground, and remain immoveable till the cause is over.

In Hudson's Bay, the firmament in winter has its peculiar beauties. The night is enlivened by the *aurora borealis* spreading its thousand lights and glowing colours over the sky, not to be dimmed even by the splendour of the full moon; and the stars are of a fiery redness; while, in the day-time, mock suns are frequently visible, richly tinged with all the hues of the rainbow.

FEBRUARY THE FOURTH.

Self-knowledge. (A Sunday Lesson.)

THE great and important end of all education is self-knowledge, which is, next to the knowledge of God, the most useful and comprehensive attainment in the whole moral system. — Self-acquaintance teaches a man the right government of his thoughts, curbs the impetuosity of the passions, prevents contentions, and preserves the mind sedate and calm, under the most aggravating attempts to throw him off his guard. It is this that, in the various scenes of adversity and prosperity, gives him a steadiness and temperance highly gratifying: for self-command is not only in itself a virtue, but from it all the other virtues seem to derive their principal lustre.

There are duties which we owe to ourselves, as well as to society; and he is usefully and honourably employed, whatever be his study, who is endeavouring to exalt the powers of his own mind, and qualifying himself with such thoughts as will inspire him with gratitude and moderation in prosperity, with resignation and fortitude in adversity, with universal benevolence, and every other virtue, and eventually prepare him for the enjoyment of immortality.

When we see a person content with being ignorant, or pursuing folly, his wonder sunk into stupid astonishment; his love lost in selfishness; and his joys bounded by his senses; a corrupt, a miserable being, who never employs a single thought beyond the indulgence of his own ap-

petite; such a man is but a degree removed from the brute creation.

One of the noblest precepts of antiquity is the following well-known saying ascribed to Pythagoras: "Reverence thyself;" or, in other words, do nothing that may corrupt your heart, or debase your character; but, in every action of your life, support the dignity of your nature, and maintain your honour.

Self-knowledge greatly encourages a spirit of meekness and charity. The more a man is acquainted with his own failings, the more he is disposed to make allowances for his associates. Cato used to maintain, that injuries were sometimes productive of good rather than evil fortune; because nothing makes a man look more into himself, and examine if he deserve them or not. We should likewise be very apprehensive of those actions which proceed from natural constitution, favourite passions, particular education, or whatever promotes our worldly interest or advantage. In these, or the like cases, a man's judgment is easily perverted, and a wrong bias given to his mind. These are the inlets of prejudice, the unguarded avenues by which a thousand errors and secret faults find admission.

Most of the troubles which we meet with in the world arise from an irritable temper and improper conduct: and it is the want of uniform behaviour in the management of our affairs, which often prevents the successful execution of those concerns on which we depend for our comfort and happiness.

FEBRUARY THE FIFTH.

On the Sun.

THE Sun has been justly styled the soul of the universe, as it not only produces all the necessities of life, but has a particular influence in cheering the mind. The rising of the Sun forms one of the most beautiful phenomena in Nature. His rays dart over the face of the earth, and darkness vanishes; while the cheerful birds unite in choirs, and hail in concert the parent of life. The bleating flocks and lowing herds salute the welcome blessing, and millions of glittering insects awake into existence, and bask in his beams.

The Sun is the parent of the seasons: day and night, summer and winter, are among his surprising effects. All the vegetable creation is warmed into life by his rays and

our own lives are supported by his influence. Nature revives when he approaches nearer to us in spring, and sinks into a temporary death at his departure from us in the winter.

They who are not accustomed to astronomical calculation, will be astonished at the real magnitude of this luminary, this immense globe, which is 763,000 English miles in diameter; while the whole Earth is not more than 7950 miles: so that the Sun is 1,392,500 times as big as the Earth.

In the infancy of astronomy the Sun was considered as one of the planets; but it is now numbered among the fixed stars. It appears to us brighter and larger than they; because we keep constantly near the Sun, and are at an immense distance from the stars. A spectator placed as near to any star as we are to our Sun, would see our Sun as small as we see a common star divested of its circumvolving planets; and in numbering the stars, he would reckon it among them.

The distance of the Sun from the Earth is 95 millions of miles; a distance so prodigious, that a cannon-ball, which is known to move at the rate of about eight miles in a minute, would be something more than twenty-two years in going from the Earth to the Sun. The Sun also moves in a circuit of its own, around the centre of the masses of the whole solar system, causing the motions of the whole, just as a pentograph causes the motions of its legs; and it is also said to have a motion through space, carrying with it the whole solar system. These motions of the Sun are the causes of all other motions in the system.

The page of history informs us, that there have been periods when the Sun has wanted its accustomed brightness, and shone with a dim obscure light for the space of a whole year. This obscurity has been supposed to arise from its surface being at these times covered with spots. And spots have been seen in modern times, that were much larger than our Earth, and visible even without the aid of a telescope.

The stars, being at immense distances from the Sun, cannot possibly receive from him that strong light they appear to have, or any brightness sufficient to render them visible to us. The stars, therefore, as well as the Sun, shine with their own native and unborrowed lustre; and since each particular star is equally confined to a parti-

cular portion of space, it is plain that the stars are of the same nature with the Sun.

It is nowise probable that the Almighty, who does nothing in vain, should create so many glorious suns, adapted to so many important purposes, and place them at such distances from one another, without proper objects near enough to be benefited by their influence. Instead, then, of one sun and one world only in the universe, as the unskilful in astronomy imagine, this science discovers to us an inconceivable number of suns, systems, and worlds, dispersed through boundless space.

What an august, what an amazing conception does this consideration give of the works of the Creator! Thousands and tens of thousands of suns ranged around us, attended by ten thousand times ten thousand worlds, all in rapid motion, yet calm, regular, and harmonious, invariably keeping the paths prescribed them, and doubtless peopled with myriads of intelligent beings, formed for endless progression in perfection and felicity! How great, how wise, how good, then must He be, who made, and upholds, and governs the whole! EDITOR

FEBRUARY THE SIXTH.

Virtue Man's true Interest.

I FIND myself existing upon a little spot, surrounded every way by an immense unknown expansion. Where am I? What sort of place do I inhabit? Is it exactly accommodated, in every instance, to my convenience? Is there no excess of cold, none of heat to offend me? Am I never annoyed by animals either of my own or of a different kind? Is every thing subservient to me, as though I had ordered all myself? — No — nothing like it — the furthest from it possible. — The world appears not, then, originally made for the private convenience of me alone.

But is it not possible so to accommodate it by my own particular industry? If to accommodate man and beast, heaven and earth be beyond me, it is not possible. — What consequence then follows? or can there be any other than this: If I seek an interest of my own detached from that of others, I seek an interest which is chimerical, and can never have existed?

How then must I determine? Have I no interest at all?

If I have not, I am a fool for staying here. It is a smoky house; and the sooner I am out of it the better. —

But why no interest? — Can I be contented with none, but one separate and detached? — Is a social interest, joined with others, such an absurdity as not to be admitted? — The bee, the beaver, and the tribes of herding animals, are enough to convince me that the thing is somewhere at least possible. How, then, am I assured that it is not equally true of man? — Admit it; and what follows? If so, then honour and justice are my interest; then the whole train of moral virtues are my interest; without some portion of which not even thieves can maintain society.

But, further still — I stop not here — I pursue this social interest as far as I can trace my several relations. I pass from my own stock, my own neighbourhood, my own nation, to the whole race of mankind, as dispersed throughout the earth. — Am I not related to them all by the mutual aids of commerce, by the general intercourse of arts and letters, by that common nature of which we all participate?

Again — I must have food and clothing: — without a proper genial warmth, I instantly perish. — Am I not related, in this view, to the very earth itself? to the distant sun, from whose beams I derive vigour? to that stupendous course and order of the infinite host of heaven, by which the times and seasons ever uniformly pass on? — Were this order once confounded, I could not probably survive a moment; so absolutely do I depend on this common general welfare. — What then have I to do, but to enlarge virtue into piety? Not only honour, and justice, and what I owe to man are my interest; but gratitude also, acquiescence, resignation, adoration, and all I owe to this great polity, and its greater governor our common parent.

HARRIS.

FEBRUARY THE SEVENTH.

Animal and Vegetable Nature compared.

LINNÆUS characterises and divides the three kingdoms of nature, the animal, the vegetable, and the mineral, in the following manner: “stones grow; vegetables grow and live; animals grow, live, and feel.”

These distinguishing properties are, indeed, well adapted to exhibit the intended idea in a popular way; but it may be questioned whether they be philosophically just. To grow, live, and feel, are only the passive properties of animals; they possess, in general, active powers of motion, instinct, and a kind of intellectual energy, which exalts

them many degrees above vegetables, and infinitely above minerals; while the different proportions of docility or sagacity, with which they are endowed, eminently distinguish the different tribes of animated nature from each other, as well as from inanimate matter.

Every animal from the highest to the lowest rank, is enabled, by some natural means, to escape or repel danger, to find security, and to investigate its proper food; but vegetables are totally unfurnished with all active means of defence, and must passively submit to every attack and every accident.

Yet notwithstanding these distinctive characters, which may be sufficient to discriminate the boundaries between an animal and a plant, they both possess so many corresponding qualities, that it appears difficult in some cases to pronounce where animal life commences, and vegetable life terminates. The sensitive plant, which shrinks from the slightest touch, seems to have as much of perception and locomotive faculty as the polypus. The moving plant furnishes a still more extraordinary example of vegetable motion.

Animals and vegetables likewise have both their periods of beginning and maturity, of improvement and decay. They reproduce their kind, and have their respective antipathies and propensities. The ferocious animals create a desert around them; and some noxious plants resemble them in this. The strong prey on the weak in both kingdoms of nature; the lion and the machineel-tree cannot endure a near approach; the serpent and the poisonous weed occupy a larger space than the harmless useful animal and the salutary plant. The vegetables produced in a dry and sunny soil are strong and vigorous, though not prolific and luxuriant; so also are the animals which range in a congenial climate. Warmth and moisture, on the contrary, render vegetables luxuriant and tender, and the animals assimilating to the nature of such food, are more bulky and flaccid.

Thus we find in the warm regions of America and Africa, where the sun commonly scorches all the upper grounds and inundations cover all the lower, that even the insect and reptile tribes acquire an extraordinary size. The earth-worm of the tropical climates in America is often a yard long, and as thick as a walking-stick; the boiguacu, or ox-serpent, reaches to the length of forty feet; the bats are larger than our domestic fowls; and the spiders may vie in size with the frogs and toads of temper-

ate regions. On the contrary, within the arctic circle, where vegetation is impeded by the rigour of the climate, animal life, through all its various classes, sensibly partakes in the diminution.

Again, if we contemplate the animals and vegetables peculiar to the watery world, we shall not fail to find new correspondences, and to recognize how well the nature of the one is adapted to the necessities of the other.

Thus, it is evident that animal and vegetable nature have a tendency to approximate towards each other. It may be observed, however, that the more perfect races recede the furthest from vegetable nature; and that in proportion to the inferiority of the animal, the affinity of the two classes is perceptibly nearer. Man, the noblest and most perfect of animals, appears to be least affected by the diversity of climate, or influenced by the aliments on which he subsists. From the polar regions to the burning sands of the equator he procures, with more or less ease, the means of subsistence; he is neither circumscribed by zones, nor confined to territories, but exists in every clime with little alteration in his nature or his form.

MAVOR's *Natural History*.

FEBRUARY THE EIGHTH

Edward II.

It is not easy to imagine a man more innocent and inoffensive than the unhappy Edward II.; or a prince less fitted for governing that fierce and turbulent people subjected to his authority. He was obliged to devolve on others the weight of government, which he had neither ability nor inclination to bear: the same indolence, and want of penetration, led him to make choice of ministers and favourites who were not always the best qualified for the trust committed to them.

The seditious grandees, pleased with his weakness, yet complaining of it, under the pretence of attacking his ministers, insulted his person, and invaded his authority; and the impatient populace, ignorant of the source of their grievances, threw all the blame upon the king, and increased the public disorders by their faction and insolence.

It was in vain to look for protection from the laws; whose voice, always feeble in those times, was not heard in the din of arms: what could not defend the king, was less able to give shelter to any one of his people: the

whole machine of government was torn in pieces with fury and violence ; and men, instead of complaining against the manners of the age, and the form of their constitution, which required the most steady and the most skilful hand to conduct them, imputed all errors to the person who had the misfortune to be entrusted with the reins of empire.

Edward II. was murdered, September 21. 1327.

Edward III.

The English are apt to consider with peculiar fondness the history of Edward III., and to esteem his reign, as it was one of the longest, the most glorious also, that occurs in the annals of their nation. The ascendant which they then began to acquire over France, their rival and supposed national enemy, makes them cast their eyes on this period with great complacency, and sanctifies every measure which Edward embraced for that end.

But the domestic government of this prince is really more admirable than his foreign victories ; and England enjoyed, by the prudence and vigour of his administration, a longer interval of domestic peace and tranquillity than she had been blest with in any former period, or than she experienced for many ages after. He gained the affections of the great, yet curbed their licentiousness ; he made them feel his power, without their daring, or even being inclined, to murmur at it : his affable and obliging behaviour, his munificence and generosity, made them submit with pleasure to his dominion ; his valour and conduct made them successful in most of their enterprises ; and their unquiet spirits, directed against a public enemy, had no leisure to breed disturbances, to which they were naturally so much inclined, and which the form of the government seemed so much to authorise.

This was the chief benefit which resulted from the victories and conquests of Edward. His foreign wars were, in other respects, neither founded in justice, nor directed to any very salutary purpose. His attempt against the king of Scotland, a minor, and a brother-in-law, and the revival of his grandfather's claim of superiority over that kingdom, were both unreasonable and ungenerous : and he allowed himself to be too soon seduced, by the glaring prospects of French conquests, from the acquisition of a point which was practicable, and which, if attained, might really have been of lasting utility to his country and his

successors.

But the glory of a conqueror is so dazzling to the vulgar.

and the animosity of nations so extreme, that the fruitless desolation of so fine a part of Europe as France is totally disregarded by us, and never considered as a blemish in the character or conduct of this prince: and indeed, from the unfortunate state of human nature, it will commonly happen, that a sovereign of genius, such as Edward, who usually finds every thing easy in his domestic government, will turn himself towards military enterprises, where alone he meets opposition, and where he has full exercise for his industry and capacity.

He died the 21st of June, 1377, aged 65, in the 51st year of his reign.

HUMF.

FEBRUARY THE NINTH.

On Politeness.

POLITENESS is the just medium between form and rudeness. It is the consequence of a benevolent nature, which shows itself to general acquaintance in an obliging, unconstrained civility, as it does to more particular ones in distinguished acts of kindness. This good nature must be directed by a justness of sense, and a quickness of discernment, that knows how to use every opportunity of exercising it, and to proportion the instances of it to every character and situation. It is a restraint laid by reason and benevolence upon every irregularity of the temper, which, in obedience to them, is forced to accommodate itself even to the fantastic cares which custom and fashion have established, if by these means it can procure in any degree the satisfaction or good opinion of any part of mankind; thus paying an obliging deference to their judgment, so far as it is not inconsistent with the higher obligations of virtue and religion.

This must be accompanied with an elegance of taste, and a delicacy observant of the least trifles, which tend to please or to oblige; and, though its foundation must be rooted in the heart, it can scarce be perfect without a complete knowledge of the world. In society it is the medium that blends all different tempers into the most pleasing harmony, while it imposes silence on the loquacious, and inclines the most reserved to furnish their share of the conversation. It represses the desire of shining alone, and increases the desire of being mutually agreeable. It takes off the edge of raillery, and gives delicacy to

wit. It preserves a proper subordination among all ranks of people, and can reconcile a perfect ease with the most exact propriety.

To superiors, it appears in a respectful freedom; no greatness can awe it into servility, and no intimacy can sink it into a regardless familiarity. . . .

To inferiors, it shows itself in an assuming good nature. Its aim is to raise them to you, not to let you down to them. It at once maintains the dignity of your station, and expresses the goodness of your heart. To equals, it is every thing that is charming; it studies their inclinations, prevents their desires, attends to every little exactness of behaviour, and all the time appears perfectly disengaged and careless.

MISS TALBOT

FEBRUARY THE TENTH.

In what Happiness consists.

OH Happiness! our being's end and aim!
 Good, pleasure, ease, content! whate'er thy name;
 That something still which prompts th' eternal sigh,
 For which we bear to live, or dare to die;
 Which still so near us, yet beyond us lies,
 O'erlook'd, seen double, by the fool, and wise.
 Plant of celestial seed! If dropt below,
 Say, in what mortal soil thou deign'st to grow?
 Ask of the learn'd the way: the learn'd are blind;
 This bids to serve, and that to shun, mankind;
 Some place the bliss in action, some in ease;
 Those call it pleasure, and contentment these;
 Some sunk to beasts, find pleasure end in pain;
 Some swell'd to gods, confess ev'n virtue vain;
 Or indolent; to each extreme they fall,
 To trust in ev'ry thing, or doubt of all.
 Remember, man, "The universal Cause
 Acts not by partial, but by gen'ral laws;"
 And makes what happiness we justly call,
 Subsist not in the good of one but all.
 Each has his share; and who would more obtain,
 Shall find the pleasure pays not half the pain.
 Order is Heaven's first law; and this confest,
 Some are, and must be, greater than the rest:
 rich, more wise; but who infers from hence
 rich are happier, shocks all common sense.

If then to all men happiness was meant,
God in externals could not place content.
Fortune her gifts may variously dispose,
And these be happy call'd, unhappy those ;
But heaven's just balance equal will appear,
While those are plac'd in hope, and these in fear :
Not present good or ill, the joy or curse,
But future views of better, or of worse.
Know, all the good that individuals find,
Or God and nature meant to mere mankind,
Reason's whole pleasure, all the joys of sense,
Lie in three words, health, peace, and competence.

POPE.

FEBRUARY THE ELEVENTH.

The Dependence of Beings upon each other.

(A Sunday Lesson.)

ALL things that the beneficent Creator has produced upon our globe are admirably connected with one another, so as to contribute to their mutual preservation. The earth itself, with its rocks and sands, its ores and its salts, owes its origin and continuance to the elements. The trees, plants, herbs, and all the vegetables, draw their subsistence from the earth ; while the animals, in their turn, feed upon the vegetables. The earth gives nourishment to the plant, the plant is food for the insect, the insect for the bird, the bird for wild beasts ; and, in rotation, the wild beasts become the prey of the vulture, the vulture of the insect, the insect of the plant, and the plant of the earth. Even man, who endeavours to turn all these things to his own use, becomes himself their prey.

Such is the circle in which all things here take their course, that all beings were created for one another. Tigers, lynxes, bears, and a number of other animals, provide us with skins and furs to cover us : dogs pursue the hare and the stag, to furnish our tables : the terrier drives the rabbit from its deepest recesses into our snares : the horse, the elephant, and the camel, are trained to carry burdens, and the ox to draw the plough : the cow gives us milk : the sheep its wool ; the rein-deer make the sledges fly over snow and ice : the hawk serves us in fowling ; and the hen gives us eggs : the cock wakes us early in the morn, and the lark amuses us with its song in

the day-time: the whistling note of the blackbird is heard from morn to evening, and then the melodious warbling of the nightingale is charming to the ear. The sportive lambs, the playful calf, the innocent doves, and the stately plumage of the peacock, give pleasure to the sight: the silk-worm spins its web to clothe us: the bees collect with care the honey we find so useful: even the sea continually throws upon its shores craw-fish, lobsters, oysters, and all sorts of shell-fish for our wonder: the glow-worm, or great fly of Surinam, shines in the midst of darkness, to give light to the inhabitants of those countries.

If we observe the different occupations of man, we shall find that they also tend to this same end, which nature purposed. The sailor braves the dangers of the seas and storms to convey merchandise, which does not belong to him, to its destined place: the ploughman sows and reaps grain, of which he consumes but little himself. Thus, we do not live for ourselves only; for the wise Author of nature has so ordained, that all beings should be useful to one another.

Let us learn hence our mutual duties. The strong should assist the weak; the well-informed should assist with his advice those who want it; the learned should instruct the ignorant: indeed we should love our neighbour as ourselves, and thus fulfil the designs of the Creator. The mutual offices men owe to one another have occasioned them to form themselves into societies. What divided force could not accomplish, is easily executed by united strength. No man could erect a stately building or palace without assistance; one person alone could not lay the foundation, dig the cellars, make and burn the bricks, raise the walls, put on the roof, furnish the windows with glass, and decorate the apartments; but all this is done with ease when different workmen assist one another.

Even things which appear to us of so little importance, that we scarce deign to look at them, all contribute to make us happy. The very insects we so much despise are useful to us. May it teach us to value as we ought the goodness of our merciful Father, and to be sensible of our own happiness!

STURM.

FEBRUARY THE TWELFTH.

On our Moon.

NEXT to the orb of day, our Moon, the satellite or inseparable companion of the Earth, appears to us the most splendid and shining globe in the heavens.

By dissipating in some measure the darkness of night; by her various appearances, subdividing the years into months; by regulating the rising and falling of the tides; she not only becomes a pleasing but a welcome object; an object affording much speculation to the contemplative mind, and of essential use to the navigator, the traveller, and the husbandman.

That our Moon appears so much larger than any other planet, is owing to her being nearer to us than the other heavenly bodies. She is not a primary planet, but an attendant upon the Earth, going round it in little more than 29 days, and round the Sun, along with the Earth, every year.

The diameter of the Moon is 2180 miles, and her distance from the centre of the Earth 240,000: she moves round her own orbit in 27 days, at the rate of 2299 miles an hour.

The most remarkable appearance, that strikes the observer, is the continual change of figure to which the Moon is subject. Sometimes she appears perfectly full, or circular; at other times half illuminated; and at others more or less than half. These changes, which are always the same at the same relative position in regard to the Sun, are a proof that she receives her light from him; that side of the Moon only being enlightened which faces the Sun; of which enlightened part a greater or less quantity is visible to us according to the position of our Earth.

The Moon is sometimes in the south at midnight, and therefore in that part of the heavens which is directly opposite to the Sun; in this situation we are between her and the Sun, her whole illuminated side is turned towards us, and she appears as a complete circle, and is called the *full moon*.

As she moves eastward, she becomes deficient on the west side, by showing part of her unilluminated half; and in about seven days and a half she comes to the meridian, or south, about six o'clock in the morning, having the appearance of a semi-circle, with the convex side turned

64 *General Rules for the Attainment of Knowledge.*

toward the Sun: in this state her appearance is called the *half-moon*.

When we look at the Moon with the naked eye, we discern a great number of irregular spots on her surface, distinguished by their dark colour from the brighter parts: but when we view the Moon through a telescope, their number is prodigiously increased, and her surface appears to be much more unequal than that of our Earth. These inequalities have great variety both in form and magnitude. Large irregular plains are discovered, on which are observed long and narrow ridges of hills running in a serpentine direction: some of these mountains form extensive chains; others, which are in general the highest, stand alone, and are of a conical shape: some have craters, and others form a circular ring inclosing a plain.

The distance of the Moon from the Sun may be considered as equal to that of the Earth; and by the rotation on its axis in the period in which it revolves round the Earth, it enjoys an agreeable variety of seasons, and of day and night.

FEBRUARY THE THIRTEENTH.

General Rules for the Attainment of Knowledge.

DEEPLY impress your mind with the vast importance of a sound judgment, and the rich and inestimable advantage of right reasoning. Review the instances of your own misconduct in life, and observe how many follies and sorrows you had escaped, if from your early years you had taken due pains to judge aright concerning persons, times, and things. This will awaken you to the work of improving your reasoning powers, and of seizing every opportunity and advantage for this end.

Read the accounts of those vast treasures of knowledge which some of the dead have possessed, and some of the living do possess, and be astonished at the almost incredible advances that have been made in science. Acquaint yourself with some persons of great learning, that, by comparing yourself with them, you may acquire a just opinion of your own attainments, and be animated with a generous and laudable emulation to equal or exceed them. But remember, if upon a few superficial acquirements you value and exalt yourself, as though you were already learned, you are thereby erecting an impassable barrier against all improvement.

Presume not too much upon a bright genius, a ready wit, and good parts; for these, without labour and study, will never make a man of knowledge and wisdom. Persons of a gay and vigorous fancy have often fallen into this mistake. They have been acknowledged to shine in an assembly, and sparkle in a discourse upon common topics, and thence have resolved to abandon reading and study; but when they have lost their vivacity of animal nature and youth, they became stupid and sottish, even to contempt and ridicule. It is meditation and studious thought, that gives good sense even to the best genius.

Exercise your reason and judgment upon all you read; for, if your learning be a mere accumulation of what others have written, without a due penetration into the meaning, and a judicious choice and determination of your own sentiments, your head has little better title to true knowledge than the shelves of your library.

Do not hover always on the surface of things, or take up suddenly with mere appearances, for this will fill the mind with errors and prejudices, and give it an ill habit of thinking; but penetrate into the depth of matters as far as your time and circumstances will allow.

Once a day, especially in the early years of life and study, examine what new ideas you have gained, and what advances you have made in any part of knowledge, and let no day if possible pass away without some intellectual gain. It was a sacred rule among the Pythagoreans, that they should every evening run thrice over the actions and affairs of the day, and examine what their conduct had been, what they had done, and what they had neglected: assured that, by this method, they would make a rapid progress in the path of knowledge and virtue. WATTS.

FEBRUARY THE FOURTEENTH.

Acknowledgment of Error the Mark of a wise and generous Mind.

THOUGH the fallibility of man's reason, and the narrowness of his knowledge, are very liberally confessed, yet the conduct of those who so willingly admit the weakness of human nature seems to discover, that this acknowledgment is not altogether sincere; and that, with whatever case they give up the claim of their neighbours, they are desirous of being thought exempt from faults in their own

conduct, and from errors in their opinions. The obstinate opposition which we may observe made to confutation however clear, to reproof however tender, is an undoubted argument, that some natural prerogative is thought to be invaded; since it could not be considered as either shameful or wonderful to be mistaken, by those who thought themselves liable to be mistaken; nor would they struggle with such earnestness against an attack, that deprived them of nothing to which they held themselves entitled.

I have heard of one, who, having advanced some erroneous doctrines in philosophy, refused to see the experiments by which they were confuted: and the observation of every day will give new proofs, with how much industry subterfuges and evasions are sought, to decline the pressure of resistless arguments; how often the state of the question is altered; the antagonist is wilfully misrepresented; and in how much perplexity the clearest positions are involved, by those whom they happen to oppose.

It is happy when this temper discovers itself only in little things, which may be right or wrong without any influence on the virtue or happiness of mankind. We may, with very little inquietude, see a man persist in a project which he has found to be impracticable, or live in an inconvenient house, because it was contrived by himself. These are indeed follies; but they are only follies, and, however wild or ridiculous, can very little affect others. But such pride, once indulged, too frequently operates upon more important objects, and inclines men to vindicate not only their errors but their vices; to persist in practices which their own hearts condemn, only lest they should seem to feel reproaches, or be made wiser by the advice of others. Let every man, whose vanity betrays him into this last degree of corruption, consider what he is going to commit, by forcing his understanding to patronise those appetites which it is his chief business to hinder and reform.

There is yet another danger in this practice; men who cannot deceive others, are very often successful in deceiving themselves; they weave their sophistry till their own reason is entangled, and repeat their positions till they are credited by themselves. By often contending, they grow sincere in the cause; and by long wishing for demonstrative arguments, they at last bring themselves to fancy that they have found them. They are then at the uttermost verge of wickedness, and may die without having that

light-rekindled in their minds, which their own pride and contumacy have extinguished.

The men who can be charged with fewest failings, either with respect to abilities or virtue, are generally most ready to allow them: for, not to dwell on things of solemn and awful consideration, the humility of confessors, the tears of saints, and the dying terrors of persons eminent for piety and innocence, it is well known that Cæsar wrote an account of the errors committed by him in his wars in Gaul; and that Hippocrates, whose name is, perhaps, in rational estimation, greater than Cæsar's, warned posterity against a mistake into which he had fallen. "So much," says Celsus, "does the open and artless confession of an error become a man conscious that he has enough remaining to support his character!"

As all error is meanness, it is incumbent on every man who consults his own dignity, to retract it as soon as he discovers it, without fearing any censure so much as that of his own mind. As justice requires that all injuries should be repaired, it is the duty of him who has seduced others by bad practices, or false notions, to endeavour that such as have adopted his errors should know his retraction, and that those who have learned vice by his example, should by his example be taught amendment. JOHNSON.

FEBRUARY THE FIFTEENTH.

Richard II.

ALL the writers who have transmitted to us the history of Richard, composed their works during the reign of the Lancastrian princes; and candour requires, that we should not give entire credit to the reproaches which have been thrown upon his memory. But, after making all proper abatements, he still appears to have been a weak prince, and unfit for government; less for want of natural parts and capacity, than of solid judgment and good education.

He was violent in his temper, profuse in his expenses, fond of idle show and magnificence, devoted to favourites, and addicted to pleasure; passions, all of them the most inconsistent with a prudent economy, and consequently dangerous in a limited and mixed government. Had he possessed the talents of gaining, and still more of over-awing his great barons, he might have escaped all the

misfortunes of his reign; and been allowed to carry much further his oppressions over his people, if he really were guilty of any, without their daring to rebel or even murmur against him. But when the grandees were tempted by his want of prudence and vigour, to resist his authority, and execute the most violent enterprises upon him, he was naturally led to seek for an opportunity of retaliation; justice was neglected; the lives of the chief nobility sacrificed; and all these evils seem to have proceeded more from a settled design of establishing arbitrary power, than from the insolence of victory, and the necessities of the king's situation.

The manners indeed of the age were the chief sources of such violence; laws, which were feebly executed in peaceable times, lost all their authority in public convulsions. Both parties were alike guilty; or if any difference may be remarked between them, we shall find the authority of the crown, being more legal, was commonly carried to less desperate extremities than was that of the aristocracy.

Richard II. was starved or murdered in prison, after having been dethroned, A.D. 1399, in the 34th year of his age, and the 23d of his reign. HUME.

FEBRUARY THE SIXTEENTH.

On Vulgarity.

A VULGAR, ordinary way of thinking, acting, or speaking, implies a low education, and a habit of low company. Young people contract it at school, or among servants, with whom they are too often used to converse; but, after they frequent good company, they must want attention and observation very much if they do not lay it quite aside; and indeed, if they do not, good company will be very apt to lay aside them.

A vulgar man is captious and jealous; eager and impetuous about trifles; he suspects himself to be slighted; thinks every thing that is said is meant at him: if the company happen to laugh, he is persuaded they laugh at him; he grows angry, and says something very impertinent, by showing what he calls a proper spirit.

A man of fashion does not suppose himself to be the principal object of the thoughts, looks, or words of the company; and never suspects that he is either slighted or

laughed at, unless he is conscious that he deserves it. He is never vehement and eager about trifles; and wherever they are concerned, rather acquiesces than wrangles.

A vulgar man's conversation turns chiefly upon himself his domestic affairs, his servants, and the little anecdotes of the neighbourhood; all which he relates with an emphasis as interesting matters.

Vulgarism in language is the next and distinguishing characteristic of bad company and bad education. A man of fashion avoids with care all proverbial expressions, and trite sayings, which are the flowers of the rhetoric of a vulgar man. He has also some favourite word, which, for the sake of using often, he commonly abuses. Such as *vastly* angry, *vastly* kind, *vastly* handsome, and *vastly* ugly. He sometimes, too, affects hard words by way of ornament, which he always mangles. A man of fashion uses neither favourite words nor hard words; but takes great care to speak very correctly and grammatically.

An awkward address, ungraceful attitudes and actions, loudly proclaim low education and low company; for it is impossible to suppose that a man can have frequented good company, without having acquired something of their air and motions. The very accoutrements of a man of fashion, are grievous incumbrances to a vulgar man. He is at a loss what to do with his hat, when it is not upon his head: his clothes fit him so ill, and constrain him so much, that he seems rather their prisoner than their proprietor. He presents himself in company like a criminal in a court of justice; his very air condemns him; and people of fashion will no more connect themselves with the one, than people of character will with the other.

CHESTERFIELD.

FEBRUARY THE SEVENTEENTH.

On Good-Breeding

GOOD-BREEDING has been justly defined to be the result of much good sense, some good-nature, and a little self-denial. Taking this for granted, it is astonishing to me, that any one who has good sense and good-nature, can essentially fail in good-breeding.

Good manners are, to particular societies, what good morals are to society in general, — their cement and their security. The immoral man, who invades another's

property, is justly hanged for it; and the ill-bred man, who by his ill manners, invades and disturbs the quiet and comforts of private life, is by common consent as justly banished society. For my own part, I really think, next to the consciousness of doing a good action, that of doing a civil one is the most pleasing; and the epithet which I should covet the most, next to that of Aristides, would be that of well-bred.

Very few, scarcely any, are wanting in the respect which they should show to those whom they acknowledge to be infinitely their superiors: such as crowned heads, princes, and public persons of distinguished and eminent posts. It is the manner of showing this respect which is different. The man of fashion, and of the world, expresses it in its fullest extent; but naturally, easily, and without concern: whereas a man who is not used to keep good company, expresses it awkwardly; we see that he is ~~not~~ used to it, and that it costs him a great deal: but I never saw the worst-bred man living guilty of lolling, whistling, scratching his head, and such indecencies, in companies that he respected.

In mixed companies, whoever is admitted to make part of them, is, for the time at least, supposed to be upon a footing of equality with the rest: and consequently, as there is no one principal object of awe and respect, people are apt to take a greater latitude in their behaviour, and to be less upon their guard: and so they may, provided it be within certain bounds, which are upon no occasion to be transgressed. But, upon these occasions, though no one is entitled to distinguished marks of respect, every one claims, and very justly, every mark of civility and good-breeding. Ease is allowed, but carelessness and negligence are strictly forbidden. If a man accost you, and talk to you ever so dully, or frivolously, it is worse than rudeness, it is brutality, to show him, by a manifest inattention to what he says, that you think him a fool or a blockhead, and not worth hearing.

Neither must you ever usurp to yourself those conveniences and gratifications which are of common right such as the best places, the best dishes, &c.; but, on the contrary, always decline them yourself, and offer them to others; who, in their turns, will offer them to you: so that, upon the whole, you will, in your turn, enjoy your share of the common right.

There is a third sort of good-breeding, in which people are the most apt to fail, from a very mistaken notion, that

they cannot fail at all. I mean with regard to our most familiar friends and acquaintances, or those who really are our inferiors; and there, undoubtedly, a greater degree of ease is not only allowed, but proper, and contributes much to the comforts of a private social life.

But ease and freedom have their bounds, which must by no means be violated. A certain degree of negligence and carelessness becomes injurious and insulting, from the real or supposed inferiority of the persons; and that delightful liberty of conversation among a few friends is soon destroyed, as liberty often has been, by being carried to licentiousness. The most familiar and intimate habitudes, connections, and friendships, require a degree of good-breeding, both to preserve and cement them. The best of us have our bad sides; and it is as imprudent as it is ill-bred to exhibit them.

CHESTERFIELD

FEBRUARY THE EIGHTEENTH.

The Advantages of Devotion. (A Sunday Lesson.)

A DEVOTIONAL spirit, united to good sense and a cheerful temper, gives that steadiness to virtue, which it always wants when produced and supported by good natural dispositions only. It corrects and humanizes those constitutional vices, which it is not able entirely to subdue; and though it too often fails to render men perfectly virtuous, it preserves them from becoming utterly abandoned. It has, besides, the most favourable influence on all the passive virtues; it gives a softness and sensibility to the heart, and a mildness and gentleness to the manners; but above all, it produces an universal charity and love to mankind, however different in station, country, or religion.

There is a sublime, yet tender melancholy, almost the common attendant on genius, which is too apt to degenerate into gloom and disgust with the world. Devotion is admirably calculated to sooth this disposition, by insensibly leading the mind, while it seems to indulge it, to those prospects which calm every murmur of discontent, and diffuse a cheerfulness over the darkest hours of human life.

Persons in the pride of high health and spirits, who are keen in the pursuits of pleasure, interest, or ambition, have either no ideas on the subject, or treat it as the enthusiasm of a weak mind. But this really shows great narrowness

of understanding; a very little reflection and acquaintance with nature might teach them on how precarious a foundation their boasted independence on religion is built; the thousand nameless accidents that may destroy it; and though for some years they should escape these, yet that time must impair the greatest vigour of health and spirits, and deprive them of all those objects, for which only, at present, they think life worth enjoying. It should seem, therefore, very necessary to secure some permanent object, some real support to the mind, to cheer the soul, when all others shall have lost their influence.

The greatest inconvenience, indeed, that attends devotion, is its taking such a vast hold of the affections, as sometimes threatens the extinguishing of every other active principle of the mind. For, when the devotional spirit falls in with a melancholy temper, it is too apt to depress the mind entirely, to sink it to the weakest superstition, and to produce a total retirement and abstraction from the world, and all the duties of life.

GREGORY.

FEBRUARY THE NINETEENTH.

Of our Earth.

THE planet which we inhabit has its peculiar privileges beyond the rest that depend upon the Sun for their support. Less distant from the great luminary than Saturn, Jupiter, and Mars; less parched than Venus and Mercury, which are more near to the violence of his power; the Earth seems in a peculiar manner to share the bounty of the Creator: it is not therefore without reason, that men consider themselves as the favoured objects of his providence and regard.

Beside that motion round the Sun, the circuit of which is performed in a year, the Earth has another upon its own axis, which it performs in twenty-four hours. Thus, like a chariot-wheel, it has a compound motion; for, while it goes forward on its journey, it is still turning upon its own centre. From the first of these two causes, the progression forward, arise the grateful vicissitudes of the seasons; from the second, the rotation on the axis, that of day and night. Both motions cause the fall of bodies towards the centre of the Earth.

The rotundity of the Earth may be proved from the phenomenon exhibited by two ships meeting at sea; the

summits of the masts of each are the first parts discovered by both, the under parts being hidden by the convexity of the globe, which rises between them.

The Earth is ninety-five millions of miles from the Sun, and it moves round the Sun in three hundred and sixty-five days five hours and forty-nine minutes. It travels in this annual orbit at the rate of 68,000 miles an hour; which motion, though 140 times as swift as that of a cannon-ball, is little more than half the velocity of the planet Mercury in his orbit.

As the Earth receives light and motion from the Sun, so it derives much of its warmth and power of vegetation from the same source. But the different parts of the Earth partake of these advantages in very different proportions, and the extremes of our globe seem equally unfitted for the comforts and conveniences of life. The imagination may find an awful pleasure in contemplating the frightful precipices of Greenland, or the luxurious verdure of Africa, yet true happiness can be found only in the more moderate climates, where the gifts of Nature may be enjoyed without incurring danger in obtaining them.

When we take a slight survey of the surface of our globe, a thousand objects offer themselves, which, though long known, still demand our attention. The most obvious beauty is the verdant covering of the earth, formed by a happy mixture of herbs and trees of various magnitudes and uses. The more awful and magnificent objects are, the mountain rising above the clouds; the wide-spread river increasing as it runs, and losing itself at last in the ocean; and the mighty ocean, spreading its immense sheet of waters over one half of the globe, swelling and subsiding at well-known intervals, and forming a communication between the most distant parts of the Earth. We are next presented with the great irregularities of nature: the burning mountain, the unfathomable cavern, the headlong cataract, and the rapid whirlpool.

If we descend below the surface of the globe, we perceive the earth lying in regular beds or strata, placed one over another like the leaves of a book, or the coats of an onion. Above it we find a transparent atmosphere, that turns with its motion, and surrounds it on every side. To this atmosphere we are indebted for the twilight, that softens the transition from broad day to total darkness: the genial showers that promote vegetation; and the cooling breezes that contribute to our health and comfort.

FEBRUARY THE TWENTIETH.

Ancient Rome.

THE city of Rome, as well as its inhabitants, was in the beginning rude and unadorned. Those old rough soldiers looked on the effects of the politer arts as things fit only for an effeminate people; as too apt to soften and unnerve men; and to take from that martial temper and ferocity, which they encouraged so much and so universally in the infancy of their state.

Their houses were only a covering for them, and a defence against bad weather. These sheds of theirs were more like the retreats of wild beasts, than the habitations of men: and were rather flung together as chance led them, than formed into regular streets and openings. Their walls were half mud, and their roofs pieces of wood stuck together: nay, even this was an after improvement; for in the time of Romulus their houses were covered only with straw.

If they had any thing that was finer than ordinary, it was generally employed in setting off the temples of their gods; and when these began to be furnished with statues, of which they had none till long after Numa's time, they were probably more fit to inspire terror than delight; and seemed rather formed so as to be horrible enough to strike an awe into those who worshipped them, than handsome enough to invite any one to look upon them for pleasure. Their design, I suppose, was answerable to their materials; and if their gods were of earthenware, they were reckoned better than ordinary; for many of them were chopped out of wood.

One of the chief ornaments in those times, both of the temples and private houses, consisted in their ancient trophies; which were trunks of trees cleared of their branches, and so formed into a rough kind of posts. These were loaded with the weapons they had taken in war; and you may easily conceive what sort of ornaments these posts must make, when half decayed by time, and hung about with old rusty arms besmeared with the blood of their enemies.

Rome was not then that beautiful Rome, the very ruins of which at this day are sought after with so much pleasure: it was a town which carried an air of terror in its

appearance; and which made people shudder whenever they first entered within its gates.

SPENCE.

FEBRUARY THE TWENTY-FIRST.

Henry IV.

THE great popularity which Henry enjoyed before he attained the crown, and which had so much aided him in the acquisition of it, was entirely lost many years before the end of his reign; and he governed the people more by terror than affection, more by his own policy than their sense of duty and allegiance.

When men came to reflect, in cold blood, on the crimes which led him to the throne, and the rebellion against his prince; the deposition of a lawful king; the exclusion of the true heir; the murder of his sovereign and near relation; these were such enormities as drew on him the hatred of his subjects, sanctified all the rebellions against him, and made the executions, though not remarkably severe, which he found necessary for the maintenance of his authority, appear cruel as well as iniquitous to his people.

Yet, without pretending to apologise for these crimes, which must ever be held in detestation, it may be remarked, that he was insensibly led into this blameable conduct by a train of incidents, which few men possess virtue enough to withstand. The injustice with which his predecessor had treated him, in first condemning him to banishment, and then despoiling him of his patrimony, made him naturally think of revenge, and of recovering his lost rights; the headstrong zeal of the people hurried him into the throne; the care of his own security, as well as his ambition, made him an usurper; and the steps have always been so few between the prisons of princes and their graves, that we need not wonder that Richard's fate was no exception to the general rule.

All these considerations made the king's situation, if he retained any sense of virtue, very much to be lamented; and the iniquitude with which he possessed his envied greatness, and the remorse by which, it is said, he was continually haunted, rendered him an object of our pity, even when seated upon the throne.

But it must be owned, that his prudence, vigilance, and foresight, in maintaining his power, were admirable: his command of temper remarkable; his courage, both mili-

tary and political, without blemish: and he possessed many qualities which fitted him for his high station, and which rendered his usurpation of it, though pernicious in aftertimes, rather salutary during his own reign to the English nation.

Henry IV. died in 1413, aged 43.

FEBRUARY THE TWENTY-SECOND.

Liberty and Despotism.

OH liberty! thou goddess heav'nly bright,
 Profuse of bliss, and pregnant with delight;
 Eternal pleasures in thy presence reign,
 And smiling plenty leads thy wanton train.
 Eas'd of her load, subjection grows more light,
 And poverty looks cheerful in thy sight;
 'Thou mak'st the gloomy face of Nature gay,
 Giv'st beauty to the sun, and pleasure to the day.

Disguise thyself as thou wilt, still, slavery! still thou art a bitter draught: and though thousands in all ages have been made to drink of thee, thou art no less bitter on that account.

It is thou, liberty, thrice sweet and gracious goddess, whom all, in public or in private, worship; whose taste is grateful, and ever will be so till Nature herself shall change.—No tint of words can spot thy snowy mantle, or chemic power turn thy sceptre into iron.—With thee to smile upon him as he eats his crust, the swain is as happy as his monarch. Gracious heaven! grant me but health, thou great Bestower of it, and give me but this fair goddess as my companion; and shower down thy coronets, if it seem good to thy Divine providence, upon those heads which are aching for them.

Pursuing these ideas, I sat down close to my table; and leaning my head upon my hand, I began to figure to myself the miseries of despotism. I was in a right frame for it, and so I gave full scope to my imagination.

I fancied a single captive; and having first shut him up in his dungeon, I then looked through the twilight of his grated door to take his picture.—I beheld his body half wasted away with long expectation and confinement, and felt what kind of sickness of the heart it was which arises from hope deferred.

Upon looking nearer, I saw him pale and feverish ; — in thirty years the western breeze had not once fanned his blood — he had no sun, no moon, in all that time — nor had the voice of friend or kinsman breathed through his lattice. His children — but here my heart began to bleed, and I was forced to go on with another part of the portrait. He was sitting upon the ground upon a little straw, in the furthest corner of his dungeon, which was alternately his chair and bed ; a little calendar of small sticks was laid at the head, notched all over with the dismal days and nights he had passed there — He had one of these little sticks in his hand, and with a rusty nail he was etching another day of misery to add to the heap.

As I darkened the little light he had, he lifted up a hopeless eye towards the door, then cast it down — shook his head and went on with his work of affliction. I heard his chains upon his legs, as he turned his body to lay his little stick upon the bundle — he gave a deep sigh — I saw the iron enter into his soul — I burst into tears — I could not sustain the picture of confinement which my fancy had drawn.

STERNE .

FEBRUARY THE TWENTY-THIRD.

The Folly of Ambition exposed — in the Speech of the Scythian Ambassadors to Alexander the Great.

IF your person were as gigantic as your desires, the world would not contain you. Your right hand would touch the east, and your left the west at the same time : you grasp at more than you are equal to. From Europe you reach Asia ; from Asia you lay hold on Europe. And if you should conquer all mankind, you seem disposed to wage war with woods and snows, with rivers and wild beasts, and to attempt to subdue Nature.

But have you considered the usual course of things ? have you reflected, that great trees are many years in growing to their height, and are cut down in an hour ? It is foolish to think of the fruit only, without considering the height you have to climb to come at it. Take care lest, while you strive to reach the top, you fall to the ground with the branches on which you have laid hold.

Besides, what have you to do with the Scythians, or the Scythians with you ? We have never invaded Macedon,

why should you attack Scythia? You pretend to be the punisher of robbers; and are yourself the general robber of mankind. You have taken Lydia; you have seized Syria; you are master of Persia; you have subdued the Bactrians, and attacked India; all this will not satisfy you, unless you lay your greedy and insatiable hands upon our flocks and our herds.

But have you forgotten how long the conquest of the Bactrians detained you? While you were subduing them, the Sogdians revolted. Your victories serve to no other purpose, than to find you employment by producing new wars; for the business of every conquest is twofold; to win, and to preserve; and though you may be the greatest of warriors, you must expect that the nations you conquer will endeavour to shake off the yoke as fast as possible; for what people choose to be under foreign dominion?

If you will cross the Tanaïs you may travel over Scythia, and observe how extensive a territory we inhabit. But to conquer us, is quite another business: you will find us, at one time, too nimble for your pursuit; and at another time, when you think we are fled far enough from you, you will have us surprise you in your camp: for the Scythians attack with no less vigour than they flee. It will therefore be your wisdom to keep with strict attention what you have gained; catching at more, you may lose what you have. We have a proverbial saying in Scythia, that Fortune has no feet, and is furnished only with hands to distribute her capricious favours, and with fins to elude the grasp of those to whom she has been bountiful.

You give yourself out to be a god, the son of Jupiter Ammon: it suits the character of a god to bestow favours on mortals, not to deprive them of what they have. But if you be no god, reflect on the precarious condition of humanity. You will thus show more wisdom, than by dwelling on those subjects which have puffed up your pride, and made you forget yourself.

You see how little you are likely to gain by attempting the conquest of Scythia. On the other hand, you may, if you please, have in us a valuable alliance. We command the borders of both Europe and Asia. There is nothing between us and Bactria but the river Tanaïs; and our territory extends to Thrace, which, as we have heard, borders on Macedon. If you decline attacking us in a hostile manner, you may have our friendship. Nations which have never been at war are on an equal footing;

but it is in vain that confidence is reposed in a conquered people; there can be no sincere friendship between the oppressors and the oppressed; even in peace, the latter think themselves entitled to the rights of war against the former.

We will, if you think good, enter into a treaty with you, according to our manner, which is not by signing, sealing, and taking the gods to witness, as is the Grecian custom; but by doing actual services. The Scythians are not used to promise, but perform without promising. And they think an appeal to the gods superfluous, because those who have no regard for the esteem of men will not hesitate to offend the gods by perjury.

You may therefore consider with yourself, whether you had better have a people of such a character, and so situated as to have it in their power either to serve you or to annoy you, according as you treat them for allies or for enemies.

Q. CURTIUS.

FEBRUARY THE TWENTY-FOURTH.

On the Choice of Company.

THAT we may be known by our company, is a truth become proverbial. The ends we have to serve may, indeed, occasion us to be often with the persons whom we by no means resemble; or, the place in which we are settled keeping us at a distance from others, if we will converse at all, it must be with some whose manners we least approve. But when we have our choice; when, if we like the company of the wise and considerate, we may have it; that we then court the one, and shun the other, seems as full a proof as we well can give, that, if we avoid vice, it is not from the sense we have of the amiableness of virtue.

For many years of our life we are forming ourselves upon what we observe in those about us. We learn not only their phrases but their manners. The civility and courtesy, which in a well-ordered family are constantly seen by its younger members, fail not to influence their deportment, and whatever their natural vulgarity may be, will dispose them to check its appearance. Let the descendant of the meanest cottager be placed from his infancy where he perceives every one mindful of decorum; the marks of his extraction are soon obliterated; at least

his carriage does not discover it. And were the heir of a dukedom to be continually in the kitchen or stable, the young lord would soon be recognised only by his clothes and title ; in other respects he might be taken for the son of the groom or the scullion.

Nor is the disposition to imitate confined to childhood : when this is past, the man continues to take his colours from those he is near ; he copies their appearance ; he seldom is what the use of his reason, or what his own inclinations, would make him.

An ancient historian, mentioning the laws which Charondas gave the Thurians, says : " He enacted a law with reference to an *evil*, on which former lawgivers had not animadverted ; that of keeping bad company. As he conceived that the morals of the good were sometimes quite ruined by their dissolute acquaintance ; that vice was apt, like an infectious disease, to spread itself and extend its contagion ; he expressly enjoined, that none should engage in any intimacy or familiarity with immoral persons ; appointed that an accusation might be exhibited for keeping bad company ; and laid a heavy fine on such as were convicted of it."

The impression made on us by what we hear, is usually much stronger than that received by us from what we read. That which passes in our usual intercourse is listened to without fatiguing us : each then taking his turn in speaking, our attention is kept awake ; we mind throughout what is said, while we are at liberty to express our own sentiments of it, to confirm, or object to it ; to hear any part of it repeated, or to ask what questions we please concerning it. Discourse is an application to our eyes as well as ears ; and the one organ is here so far assistant to the other, that it greatly increases the force of what is transmitted to our minds by it. The air and action of the speaker give no small importance to his words ; and the very tone of his voice adds weight to his reasoning.

That bad companions will make us as bad as themselves, I do not absolutely affirm. When we are not kept from their vices by our principles, we may be by our constitutions ; we may be less profligate than they, by being more cowardly ; but what I advance as certain is, that we cannot be safe among them, and that they will in some degree, and may in a very great one, hurt our morals. Pythagoras, before he admitted any one into his school, inquired who were his intimates, justly concluding, that

they who could choose immoral companions would not be much profited by his instructions. DEAN BOLTON.

FEBRUARY THE TWENTY-FIFTH.

On the Study of the Holy Scriptures. (A Sunday Lesson.)

THE great laws of morality are written in our hearts, and may be discovered by reason; but our reason is of slow growth, and very unequally dispensed to different persons, liable to error, and confined within very narrow limits in all. If, therefore, God have vouchsafed to grant a particular revelation of his will, it becomes us to receive his precepts with the deepest reverence; to love and prize them above all things; and to study them constantly, with an earnest desire to confirm our thoughts, words, and actions to them.

As you advance in years and understanding, you will be able to examine for yourself the evidences of the Christian religion, and be convinced, on rational grounds, of its Divine authority. At present, such inquiries would demand more study, and greater powers of reasoning, than your age admits. It is your part, therefore, till you are capable of understanding the proofs, to believe your parents and teachers, that the Holy Scriptures contain a true history of facts, a true recital of the laws given by God to Moses, and of the precepts of our blessed Lord and Saviour, delivered from his own mouth to his disciples, and repeated and enlarged upon in the edifying epistles of his apostles.

This sacred volume must be the rule of your life. In it you will find all truths necessary to be believed; and plain and easy directions for the practice of every duty. Your Bible then must be your chief study and delight; but as it contains many various kinds of writing, some parts obscure and difficult of interpretation, others plain and intelligible to the meanest capacity, I would chiefly recommend to your frequent perusal such parts of the sacred writings as are most adapted to your understanding, and most necessary for your instruction.

Our Saviour's precepts were spoken to the common people among the Jews; and were therefore given in a manner easy to be understood, and equally striking and instructive to the learned and unlearned; for the most ignorant may comprehend them, while the wisest must be

charmed and awed by the beautiful and majestic simplicity with which they are expressed. Of the same kind are the ten commandments, delivered by God to Moses; which, as they were designed for universal laws, are worded in the most concise and simple manner, yet with a majesty that commands our utmost reverence.

I think you will receive great pleasure, as well as improvement, from the historical books of the Old Testament; provided you read them as a history, in a regular course, and keep the thread of it in your mind, as you go on. I know of none, true or fictitious, that is equally wonderful, interesting, and affecting; or that is told in so short and simple a manner as this, which is, of all histories, the most authentic.

CHAPONE.

FEBRUARY THE TWENTY-SIXTH.

The Grotto of Antiparos.

OF all the subterraneous caverns now known, the grotto of Antiparos, an inconsiderable island in the Archipelago, is the most remarkable, as well for its extent as for the beauty of its sparry incrustations. This celebrated cavern was first explored by an Italian traveller, in the seventeenth century.

Having been informed, says he, by the natives of Paros, that in the little island of Antiparos, which lies about two miles from the former, a gigantic statue was to be seen at the mouth of a cavern, the French consul and myself resolved to pay it a visit.

After we had landed on the island, and walked about four miles through the midst of beautiful plains and sloping woodlands, we at length came to a little hill, on the side of which yawned a horrible cavern, that by its gloom struck us with terror, and almost repressed curiosity.— Recovering the first surprise, however, he entered boldly; and had not proceeded above twenty paces, when the supposed statue of the giant presented itself to our view. We quickly perceived, that what the ignorant natives had been terrified at as a giant, was nothing more than a sparry concretion formed by the water dropping from the roof of the cave, and by degrees hardening into a figure, which their fears had transformed into a monster.

Incited by this extraordinary appearance, we were induced to proceed still further into this subterranean abode

As we proceeded, new wonders offered themselves; the spars, formed into trees and shrubs, presented a kind of petrified grove; some white, some green, and all receding in due perspective. They struck us with the more amazement, as we knew them to be mere productions of Nature, who, hitherto in solitude, had in her playful moments dressed the scene as if for her own amusement.

We had yet seen but a few of the wonders of the place, and were introduced only into the portico of this amazing temple. In one corner of this half-illuminated recess, there appeared an opening about three feet wide, which seemed to lead to a place totally dark, and which one of the natives assured us contained nothing more than a reservoir of water. Upon this information, we made an experiment by throwing down some stones, which rumbling along the side of the descent for some time, the sound seemed at last quashed in a bed of water.

Our candles being now all lighted up, and the whole place completely illuminated, never could the eye be presented with a more glittering or a more magnificent scene. The whole roof hung with solid icicles, transparent as glass, yet hard as marble. The eye could scarcely reach the lofty and noble ceiling; the sides were regularly formed of spars, and the whole presented the idea of a superb theatre, illuminated by an immense profusion of lights. The floor consisted of solid marble, and in several places magnificent columns, thrones, altars, and other objects, appeared, as if nature had designed to mock the curious productions of art. Our voices upon speaking or singing, were redoubled to an astonishing loudness; and upon the firing of a gun, the noise and reverberations were almost deafening.

In the midst of this grand amphitheatre rose a concretion of about fifteen feet high, that in some measure resembled an altar; and we caused mass to be celebrated there.—The beautiful columns that shot up round the altar appeared like candlesticks; and many other natural objects represented the customary ornaments of this rite.

Below even this spacious grotto there seemed another cavern, down which I ventured with my former mariner, and descended about fifty paces by means of a rope. I at last arrived at a small spot of level ground, where the bottom appeared different from that of the amphitheatre, being composed of some clay, yielding to the pressure, and into which I thrust a stick to the depth of six feet.

In this, however, as above, numbers of the most beautiful crystals were formed; one of which particularly resembled a table.

Upon our egress from this amazing cavern, we perceived a Greek inscription upon a rock at the mouth, but so obliterated by time that we could not read it distinctly. It seemed to import that one Antipater had come hither; but whether he penetrated into the depths of the cavern he does not think fit to inform us. This account of so beautiful and striking a scene may serve to give us some idea of the subterranean wonders of nature.

J. GOLDSMITH.

FEBRUARY THE TWENTY-SEVENTH.

Customs of various Nations in their Repasts.

THE Maldivian islanders eat alone. They retire to the most hidden parts of their houses, and draw down the cloths which serve as blinds to their windows, that they may eat unobserved. An absurd reason may be alleged for their misanthropical repast: they will never eat with one who is inferior to them in birth, in riches, or dignity; and as it is a difficult matter to settle this equality, they are condemned to lead this unsociable life.

On the contrary, the inhabitants of the Philippines are remarkably sociable. Whenever one of them finds himself without a companion to partake of his meal, he runs till he meets with one; and, however keen his appetite may be, he ventures not to satisfy it without a guest.

The tables of the rich Chinese shine with a beautiful varnish, and are covered with silk carpets very elegantly worked. The master of the house absents himself while his guests regale at his table with undisturbed revelry. They do not make use of plates, knives, or forks; but their food is served up in dishes, out of which they eat in common; and for this purpose every guest has two little ivory or ebony sticks, which he handles very adroitly.

The Otaheitans, who are lovers of society, and very gentle in their manners, eat separate from each other. At the hour of repast the members of each family divide; two brothers, two sisters, and even husband and wife, parents and children, have each their respective basket. They

place themselves at the distance of two or three yards from each other, they turn their backs, and take their meal in profound silence.

Among the greater part of the American Indians, the host is continually on the watch to solicit his visitors to eat, but touches nothing himself. In New France the host wearies himself with singing to divert the company while they eat.

The Tartars pull a man by the ear, to press him to drink; and they continue tormenting him, till he opens his mouth: they then clap their hands and dance before him.

No customs seem more ridiculous than those practised by a Kamtschatdale, when he wishes to make another his friend. He first invites him to eat. The host and his guest then strip themselves in a hut, which is heated to an uncommon degree. While the guest devours the food set before him, the other is continually stirring the fire. The stranger must bear the excess of the heat as well as the repast. He vomits ten times before he will yield. At length he purchases a respite by a present of clothes or dogs; for his host threatens to heat the hut, and oblige him to eat till he dies. The stranger has the right of retaliation allowed him, and the host passes through the same ceremonies in the hut of the stranger. Should the host refuse to accept the invitation of his guest, the stranger would return and inhabit his hut, till he had obtained back the presents so singularly extorted from him.

It is said, that this extraordinary custom is used as a trial of the constancy and firmness of the person whose friendship is sought. The Kamtschatdale, who is at the expense of the first repast, is desirous to know whether the stranger have strength to endure pain with him, and generosity enough to share with him some part of his property: and in his turn he shows with what degree of fortitude he can defend his friend. Thus the most singular customs among unpolished nations would probably appear, however absurd in their form, to have a moral tendency, if they could always be investigated by the eye of the philosopher.

FEBRUARY THE TWENTY-EIGHTH.

Advantages of a Taste for the Beauties of Nature.

THAT perception and sensibility to beauty, which, when cultivated and improved, we term taste, is most general

and uniform with respect to those objects which are not liable to variation from accident, caprice, or fashion. The verdant dawn, the shady grove, the variegated landscape, the boundless ocean, and the starry firmament, are contemplated with pleasure by every beholder. But the emotions of different spectators, though similar in kind, differ widely in degree: for, to relish with full delight the enchanting scenes of nature, the mind must be uncorrupted by avarice, sensuality, or ambition; quick in her sensibilities, elevated in her sentiments, and devout in her affections.

If this enthusiasm were cherished by each individual, in that degree which is consistent with the indispensable duties of his station, the felicity of human life would be considerably augmented. From this source the refined and vivid pleasures of the imagination are almost entirely derived. The elegant arts owe their choicest beauties to a taste for the contemplation of nature. Painting and sculpture are express imitations of visible objects: and where would be the charms of poetry, if divested of the imagery and embellishments which she borrows from rural scenes? Painters, statuarys, and poets, therefore, are always ambitious to acknowledge themselves the pupils of nature; and, as their skill increases, they grow more and more delighted with every view of the animal and vegetable world.

The scenes of nature contribute powerfully to inspire that serenity which heightens their beauties, and is necessary to our full enjoyment of them. By a secret sympathy, the soul catches the harmony which she contemplates; and the frame within assimilates itself to that without. In this state of sweet composure, we become susceptible of virtuous impressions from almost every surrounding object. The patient ox is viewed with generous complacency; the guileless sheep with pity; and the playful lamb with emotions of tenderness and love. We rejoice with the horse in his liberty and exemption from toil, while he ranges at large through enamelled pastures. We are charmed with the songs of birds, soothed with the buzz of insects, and pleased with the sportive motion of fishes, because these are expressions of enjoyment; and, having felt a common interest in the gratifications of inferior beings, we shall be no longer indifferent to their sufferings, or become wantonly instrumental in producing them.

But the taste for natural beauty is subservient to higher purposes than those which have been enumerated. The

Natural Phenomena of the Month of March.

cultivation of it not only refines and humanises, but dignifies and exalts the affections. It elevates them to the admiration and love of that Being, who is the author of all that is fair, sublime, and good in the creation. Scepticism and irreligion are hardly compatible with the sensibility of heart which arises from a just and lively relish of the wisdom, harmony, and order subsisting in the world around us. Emotions of piety must spring up spontaneously in the bosom that is in unison with all animated nature. Actuated by this beneficial and divine inspiration, man finds a fane in every grove; and, glowing with devout fervour, he joins his song to the universal chorus, or muses the praise of the Almighty in more expressive silence.

PERCIVAL.

MARCH THE FIRST.

Natural Phenomena of the Month of March

THE great operations of Nature during this month seem to be, to dry up the superabundant moisture of February, thereby preventing the roots and seeds from rotting in the earth, and gradually to bring forward the process of evolution in the swelling buds; while at the same time, by the wholesome severity of chilling blasts, they are kept from a premature disclosure, which would expose their tender contents to injury from the yet unsettled season.

The winds of March, boisterous and vehement to a proverb, are to be regarded, however, as particularly useful to vegetation; for those years generally prove most fruitful, in which the pleasing appearances of spring are the most retarded. The importance of a dry season for getting the seed early and favourably into the ground is expressed in the old proverb, *a bushel of March dust is worth a king's ransom.*

The mellow note of the thrush, singing perched on the naked bough of some lofty tree, and the cooing of the ring-dove in the woods, are heard from the beginning of the month of March. The rooks also are now in motion, building and repairing their nests; and it is highly amusing to observe the tricks and artifices of this thievish tribe, some to defend, and others to plunder, the materials of their new habitations. These birds are accused of doing much injury to the farmer, by plucking up the young corn, and other springing vegetables; but some are of

opinion, that this mischief is fully repaid by their diligence in devouring the grubs of various insects, which, if suffered to come to maturity, would occasion much greater damage. For this purpose, they are frequently seen following the plough, or settling in flocks on newly turned-up lands.

In the month of March, those birds which took refuge in our temperate climate from the rigour of the northern winters begin to leave us, and return to the countries where they were bred. The redwing, fieldfare, and woodcock, are of this kind, and retire to spend their summer in Norway, Sweden, and other parts of the north of Europe. Frogs, which during winter lie in a torpid state at the bottom of ponds or ditches, now enlivened by the warmth of spring, rise in vast numbers to the surface of the water, and make themselves heard to a surprising distance by their croakings. Those small but beautiful fish called smelts, or sparlings, proceed up the rivers in this month in order to spawn; but they are of so tender a nature, that the least mixture of snow-water in the river drives them back to sea.

One of the most agreeable tokens of our approach of spring is, that about the middle of the month of March bees venture out of their hives. These admirable and useful insects appear to be possessed of uncommon foresight of the weather; so that their appearance in the morning may be reckoned a sure token of a fair day. As their food is the sweet juice to be found in the nectaries of flowers, their coming abroad is a certain sign that flowers are now to be met with. The gardens are adorned with the yellow and purple crocus; and, toward the end of the month, primroses peep out beneath the hedges, while the most fragrant of all flowers, the violet, discovers itself by the perfume it imparts to the surrounding air. The peach, the nectarine, the almond, apricot, and cherry-trees, come into full bud during this month; the willow enlivens the hedges with its catkins full of yellow dust; and the leaves of the honey-suckle are nearly expanded.

In the latter part of the month of March the *equinox* happens, when day and night are of an equal length all over the globe; or rather, when the sun is an equal time above and below the horizon: for the morning and evening twilight make apparent day considerably longer than night. This takes place again in September. The former is called the *vernal*, the latter the *autumnal* equinox.

AIKIN.

MARCH THE SECOND.

Destruction of the Alexandrian Library.

THE Alexandrian Library was the most celebrated in the world. It was founded by Ptolemy Soter, in the new city of Alexandria, who assumed the sovereignty of Egypt on the death of Alexander, and augmented by his successors till it contained seven hundred thousand volumes. When Alexandria was besieged by Julius Cæsar, one part of it; with four hundred thousand volumes, was burned to ashes. Cleopatra added to the remainder two hundred thousand volumes from the Pergamean library given her by Mark Antony; and subsequent additions made it more numerous than before. During the revolutions in the decline of the Roman empire it was often plundered, and again replenished with books.

When Alexandria was taken by the Mohammedans, Amrou, their commander, found there one Philoponus, a learned man; and as Amrou was a lover of letters, the conversation of Philoponus highly delighted him. On a certain day when they were together, Philoponus said to Amrou. You have visited all the repositories or public warehouses in Alexandria, and you have sealed up things of every sort that are to be found in them. As to those things that may be useful to you, I presume to say nothing but as to things of no service to you, some of them perhaps may be more suitable to me.

And what is it that you want? said Amrou.—The philosophical books, replied Philoponus, preserved in the royal libraries.—This, said Amrou, is a request upon which I cannot decide. You desire a thing whereon I dare issue no orders, till I have leave from Omar, the commander of the faithful.

Letters were immediately written to Omar by Amrou, informing him of what Philoponus had requested; and an answer was returned by Omar to the following purport. “As to the books of which you have made mention, if there be in them what accords with the book of God,” meaning the Koran, “there is, without them, in the book of God all that is sufficient. But if there be any thing in them repugnant to that book, we in no respect want them. I command you, therefore, to order them all to be destroyed.”

Amrou, upon this, ordered them to be dispersed through

the baths warm. By this means, in the space of six months they were all consumed.

Thus ended the celebrated Alexandrian library : and thus began, if it did not begin sooner, the age of barbarism and ignorance. HARRIS.

MARCH THE THIRD.

Advantages of good Elocution.

YOUR very bad enunciation, my son, gives me real concern ; and I congratulate both you and myself, that I was informed of it, as I hope in time to prevent it ; and shall ever think myself, as hereafter you will, I am sure, think yourself, infinitely obliged to your friend for informing me of it.

If this ungraceful and disagreeable manner of speaking had, either by your negligence or mine, become habitual to you, as in a couple of years more it would have been, what a figure would you have made in company, or in a public assembly ! Who would have liked you in the one, or attended to you in the other ? Read what Cicero and Quintilian say of enunciation, and observe what a stress they lay upon the gracefulness of it : nay, Cicero goes further, and even maintains that a good figure is necessary for an orator ; and particularly that he must not be *vastus*, that is, overgrown and clumsy. He shows by it, that he knew mankind well, and knew the powers of an agreeable figure and a graceful manner.

Men are oftener led by the ears than by their understandings. The way to the heart is through the senses ; please their eyes and their ears, and the work is half done. I have frequently known a man's fortune decided for ever by his first address. If it be pleasing, people are hurried involuntarily into a persuasion that he has merit, which possibly he has not ; as, on the other hand, if it be ungraceful, they are immediately prejudiced against him, and unwilling to allow him the merit which it may be he has.

Nor is this sentiment so unjust and unreasonable as at first it may seem ; for, if a man have parts, he must know of how much consequence it is to him, to have a graceful manner of speaking and a genteel and pleasing address, and he will cultivate and improve them to the utmost. What is the constant and just observation, as to all actors upon the stage ? Is it not, that those who

have the best sense, always speak the best, though they may happen not to have the best voices? They will speak plainly, distinctly, and with a proper emphasis, be their voices ever so bad. Had Roscius spoken *quick, thick, and ungracefully*, I will answer for it, that Cicero would not have thought him worth the oration which he made in his favour. Words were given us to communicate our ideas by; and there must be something inconceivably absurd, in uttering them in such a manner, as that people either cannot understand them, or will not desire to understand them.

I tell you truly and sincerely, that I shall judge of your parts by your speaking gracefully or ungracefully. If you have parts, you will never be at rest till you have brought yourself to a habit of speaking most gracefully; for I aver that it is in your power. You will desire your tutor to permit you to read aloud to him every day; and to interrupt and correct you every time you read too fast, do not observe the proper stops, or lay a wrong emphasis.

You will take care to open your teeth when you speak; to articulate every word distinctly; and to beg of any friend you converse with, to remind and stop you, if ever you fall into the rapid and unintelligible mutter. You will even read aloud to yourself, and tune your utterance to your own ear; and read at first much slower than you need to do, in order to correct that shameful habit of speaking faster than you ought. In short, you will make it your business, your study, and your pleasure, to speak well, if you think right. Therefore what I have said is more than sufficient, if you have sense; and ten times more would not be sufficient, if you have not. CHESTERFIELD

MARCH THE FOURTH.

On the Period and Uses of Human Life.

(A Sunday Lesson.)

As the eye of morning to the lark, as the shade of evening to the owl, as honey to the bee, or as the carcass unto the vulture; even such is life unto the heart of man.

Learn to esteem life as it deserves; then art thou near the pinnacle of wisdom.

Think not with the fool, that nothing is more valuable,

contemn it. Love it not for itself, but for the good it may render to others.

Gold cannot buy it for thee, neither can mines of diamonds purchase back the moment thou hast now lost of it. Employ the succeeding ones in virtue.

Though its ways are uneven, yet are they not all painful. Accommodate thyself to all: and where there is least appearance of evil, suspect the greatest danger.

When thy bed is straw, thou sleepest in security; but when thou stretchest thyself on roses, beware of the thorns.

A good death is better than an evil life: strive, therefore, to live as long as thou oughtest, not as long as thou canst. While thy life is to others worth more than thy death, it is thy duty to preserve it.

Complain not with the fool of the shortness of thy time: remember that with thy days thy cares are shortened.

He who gave thee life as a blessing, shortened it to make it more so. To what end would longer life have served thee? Wishest thou to have had an opportunity of more vices? As to the good, will not he who limited thy span be satisfied with the fruits of it?

Enough hast thou of life, but thou regardest it not: thou art not in want of it, O man! thou art prodigal; thou throwest it lightly away, as if thou hadst more than enough; and yet thou repinest that it is not gathered again unto thee!

Know that it is not abundance which maketh rich, but economy.

The wise continueth to live from his first period; the fool is always beginning.

Labour not after riches first, and think thou afterward will enjoy them. He who neglecteth the present moment, throweth away all he hath. As the arrow passeth through the heart, while the warrior knew not that it was coming; so shall his life be taken away, before he knoweth that he hath it.

As one wave pusheth on another, till both are involved in that behind them, even so succeedeth evil to evil in the life of man: the greater and the present swallow up the less and the past. Our terrors are real evils; our expectations look forward to improbabilities.

It is said grey hairs are revered, and in length of days is honour.

Virtue can add reverence to the bloom of youth; and without it, age plants more wrinkles in the soul than on the forehead.

Be virtuous while thou art young, so shall thine age be
honoured.

DODSLEY.

MARCH THE FIFTH.

Singular Properties of some Minerals.

IT is impossible for our weak and limited understandings to take in at once the whole compass of nature, and to learn altogether the wonderful properties of things. We shall more certainly extend our knowledge, if we begin with some separate objects, some particular beauties, and dwell first on the most striking phenomena.

Among these there are few more worthy of attention than the loadstone. When this stone is suspended, it turns itself constantly, one end toward the north, the other toward the south; and it is in these two ends, or poles, that it has the strongest power of attraction. It is remarkable, that it attracts nothing but iron and nickel, and that, if two loadstones be placed near together, their opposite poles, that is to say, the southern and northern, attract one another; while the poles of the same denomination repel, and seem to flee from each other.

There are two properties found in quicksilver equally wonderful. It takes any form that we wish to give it; but it always ends by reassuming its own natural form. On the fire it rises in vapour. When it is shaken a long time, it changes into dust. By being dissolved, it becomes a hard and transparent crystal; yet it can always be reduced again to its former fluid state.

Gold is the first and most valuable of all metals, not only from its scarcity, but from its admirable properties. It is one of the most unalterable of all bodies. It can bear for two months being in the hottest fire, without any sensible loss in its weight. Its parts are so fine, and its ductility so great, that a grain of gold may be beaten so thin as to form a surface of fifty square inches; or made to cover completely a silver wire five hundred feet long.

The wonderful forms of various salts, even that which comes to our tables; the variety of brilliant stones; the singular figures of the ores in which metals lie hidden; the remarkable petrified bodies, that are frequently found on the tops of lofty mountains, some hundred miles from the sea, which is their original source; and many other singularities in the mineral world, seem formed to awaken our curiosity, and stimulate our desire of knowledge.

No employment whatever has more charms, is more satisfactory, or has more variety in it, than an attentive observation of Nature. The satisfaction which such a pursuit affords will increase more and more, in proportion as we reflect more attentively on the views God has proposed to himself in his works; for the wonders of Nature are infinitely more sublime, and more to be admired, than all the productions of human art. The latter do not always promote our welfare, or make us better: they are often mere objects of fruitless admiration. But all the works of Nature, even the most singular among them, tend to the universal good of the world. They exist not only to be seen, but also to be enjoyed; and all, without exception, proclaim the goodness as well as the wisdom of God.

STURM.

MARCH THE SIXTH.

Our Obligations to the Country.

Theron, a man of wealth and figure, but unacquainted with philosophic science, sat in the midst of his friends of both sexes in a stately room with rich variety of furniture. Among other conversation, Theron was complaining, that he had heard it often said, how much we were all indebted to the country and the plough; but, for his part, "he knew no obligation that we had to that low rank of mankind, whose life is taken up in the fields, the woods, and the meadows, but that they paid their rents well, that the gentlemen might live at their ease."

Crito, a philosopher present, was pleased to seize on this occasion, and entertained the audience with a surprising lecture of philosophy.

Permit me, Theron, said he, to be an advocate for the peasant, and I can draw up a long account of particulars for which you are indebted to the field and the forest, and to the men that cultivate the ground, and are engaged in rural business. Look around you on all the elegant furniture of the room, survey your own clothing, cast your eyes on all the splendid array of the ladies; and you will find that except a few glittering stones, and a little gold and silver, which was dug out of the bowels of the earth, you can scarcely see any thing that was not once growing green upon the ground, through the various labours of the planter and the ploughman.

Whence came the floor you tread on, part whereof is

inlaid with wood of different colours? whence these fair pannels of wainscot, and the cornice that encompasses and adorns the room? whence this lofty roof of cedar, and the carved ornaments of it? Are they not all the spoils of the trees of the forest? were not these once in verdant standards of the grove or the mountain?

What are your hangings of gay tapestry? Are they not owing to the fleece of the sheep, which borrowed their nourishment from the grass of the meadows? Thus, the finery of your parlour once was grass; and should you favour me with a turn into your bed-chamber, I could show you that the curtains and the linen, and the costly coverings where you take your nightly repose, were some years ago all growing in the field.

Is not the hair of camels a part of the materials which compose those rich curtains that hang down by the window, and the easy chairs which accommodate your friends? And if you think a little, you will find that camels with their hair were made of grass, as well as the sheep and their wool. I confess the chimney and the coals, with the implements of the hearth, the brass and iron, were dug out of the ground from their beds of different kinds, and you must go below the surface of the earth to fetch them: but what think you of those nice tables of mosaic work? They confess the forest their parent.

What are the books which lie in the window, and the little implements of paper and wax, pens and wafers, which I presume may be found in the scrutoire? And may I not add to these, that inch of wax-candle which stands ready to seal a letter, or perhaps to light a pipe? You must grant they have all the same origin, they were once mere vegetables.

Paper and books owe their being to the tatters of linen, which was woven of the threads of flax or hemp; the pasteboard covers are composed of paper; and the leather is the skin of the calf, that drew its life and sustenance from the meadows. The pen that you write with was plucked from the wings of the goose, which lives upon the grass of the common: the inkhorn was borrowed from the front of the grazing ox; the wafer is made of the paste of bread-corn; the sealing-wax is said to be formed chiefly of the gum of a tree; and the wax for the candle was plundered from the bee, who stole it out of a thousand flowers.

MARCH THE SEVENTH.

Our Obligations to the Country. (Concluded.)

PERMIT me, ladies, said the philosopher, to mention your dress; too nice a subject indeed for a scholar to pretend any skill in; but I persuade myself your candour will not resent my naming the rich materials, since I leave those more important points, the fashion and the shape, to be decided entirely by your superior skill. Shall I inquire then, who gave Eliza the silken habit which she wears? Did she not borrow it from the worm that spun those shining threads? and whence did the worm borrow it, but from the leaves of the mulberry-tree, which was planted and nourished for this purpose by the country swain?

May I ask again how came Emily by those ornaments of fine linen which she is pleased to appear in, and the costly lace of Flanders that surrounds it? Was it not all made of the stalks of flax that grew up in the field like other vegetables? And are not the finest of your muslins owing to the Indian cotton-tree?

Nor can you tell me, Theron, one upper garment you have, whether coat, cloak, or night-gown, from your shoulders to your very feet, as rich and as new as you think it, which the sheep or the poor silk-worm had not worn before you. It is certain the beaver bore your hat on his skin: that soft fur was his covering before it was yours; and the materials of your very shoes, both the upper part and the soles of them, covered the calf or the heifer before they were put on your feet: all this was grass at first, for all the animal world owes its being to vegetables.

When Crito had given them leave to muse a little, he took up the argument again. Give me leave, madam, said he to Eliza, without offence, to lead you into further wonders. You have seen that the furniture of the place where we are, as well as the precious attire in which you are drest, were lately the production and the ornaments of the forest, the meadow, or the garden. But could you forgive me, madam, if I should attempt to persuade you, that that beautiful body of yours, those features and those limbs, were once growing also in the fields and the meadows? I see, lady, you are a little shocked and surprised at the thought.

I confess the ideas and sentiments of philosophy are not always so courtly and so favourable to human nature as to be addressed to the tender sex: but pardon me, Laura, if I inquire, was not your infancy nursed with milk and bread-

corn? Have you not been fed with wheat, though it was of the finest kind? And your drink, what has it been but either the infusion of barley, or the juice of the grape? or for variety, perhaps, the cider-grove has supplied you. The flesh with which you have been nourished to such a well-proportioned stature belonged to four-footed animals, or to the fowls of the air; and each of these has either been fed with corn or grass; whence then has your own body been supported, and what do you think it is made of?

But it is safer to transfer the argument to myself. These limbs of mine owe themselves entirely to the animal or vegetable food, to the roots or the stalks, to the leaves or the fruit of plants, or to the flesh of brute creatures, which have passed through my mouth for these fifty years, or the mouths of my parents before me: this hand would have been worn to a mere skeleton, my arms had been dry bones, and my trunks and ribs the statue of death, had they not all received perpetual recruits from the field. These lips which now address you are of the same materials, and they were once growing in the grass of the earth. This very flesh which I call mine now, did belong to the sheep or the ox, before it was a part of me; and it served to clothe their bones before it covered mine.

It is true, you have sometimes tasted of fish, either from the sea, or the rivers: but even these in their original also are a sort of grass; they have been fed partly by seaweeds, and partly by lesser fish, which they have devoured, whose prime and natural nourishment was from some vegetable matter in the watery world.

In short, sir, I am free to declare, that whether I have eaten cheese or butter, bread or milk; whether I have fed on the ox or the sheep, the fowls of the air, or the fish of the sea, I am certain that this body, and these limbs of mine, even to my teeth and nails, and the hairs on my head, are all borrowed originally from the vegetable creation. Every thing of me that is not a thinking power, that is not mind or spirit, was once growing like grass on the ground, or was made of the roots which supported some green herbage.

WATTS.

MARCH THE EIGHTH.

Resignation of the Emperor Charles V.

CHARLES resolved to resign his kingdoms to his son with a solemnity suitable to the importance of the transaction;

and to perform this last act of sovereignty with such formal pomp, as might leave an indelible impression on the minds, not only of his subjects, but of his successor.

With this view he called Philip out of England, where the peevish temper of his queen rendered him extremely unhappy, and the jealousy of the English left him no hopes of obtaining the direction of their affairs. Having assembled the states of the Low Countries at Brussels, on the 25th of October, 1555, Charles seated himself for the last time in the chair of state; on one side of which was placed his son, and on the other his sister, the queen of Hungary, regent of the Netherlands; with a splendid retinue of the grandees of Spain and princes of the empire standing behind him.

The president of the council of Flanders, by his command, explained, in a few words, his intention in calling this extraordinary meeting of the states. He then read the instrument of resignation, by which Charles surrendered to his son Philip all his territories, jurisdiction, and authority in the Low Countries; absolving his subjects there from their oath of allegiance to him, which he required them to transfer to Philip, his lawful heir, and to serve him with the same loyalty and zeal which they had manifested during so long a course of years in support of his government.

Charles then rose from his seat, and leaning on the shoulder of the prince of Orange, because he was unable to stand without support, he addressed himself to the audience, and, from a paper which he held in his hand, in order to assist his memory, he recounted with dignity, but without ostentation, all the great things which he had undertaken and performed since the commencement of his administration.

He observed, that from the seventeenth year of his age he had dedicated all his thoughts and attention to public objects; reserving no portion of his time for the indulgence of his ease, and very little for the enjoyment of private pleasure; that, either in a pacific or hostile manner, he had visited Germany nine times, Spain six times, France four times, Italy seven times, the Low Countries ten times, England twice, Africa as often, and had made eleven voyages by sea: that, while his health permitted him to discharge his duty, and the vigour of his constitution was equal, in any degree, to the arduous office of governing such extensive dominions, he had never shunned labour.

or ropined under fatigue: that now, when his health was broken, and his vigour exhausted by the rage of an incurable distemper, his growing infirmities admonished him to retire; nor was he so fond of reigning, as to retain the sceptre in an impotent hand, which was no longer able to protect his subjects, or to render them happy: that, instead of a sovereign worn out with disease, and scarcely half alive, he gave them one in the prime of life, accustomed already to govern, and who added to the vigour of youth all the attention and sagacity of maturer years: that if, during the course of a long administration, he had committed any material error in government; or if under the pressure of so many and great affairs, and amid the attention which he had been obliged to give to them, he had either neglected or injured any of his subjects, he now implored their forgiveness: that, for his part, he should ever retain a grateful sense of their fidelity and attachment, and would carry the remembrance of it along with him to the place of his retreat, as his sweetest consolation, as well as the best reward for all his services; and in his last prayers to Almighty God, would pour forth his ardent wishes for their welfare.

ROBERTSON.

MARCH THE NINTH.

On Music as an Amusement.

Most of the pleasurable diversions have a tendency, when pursued with excessive ardour, not only to relax in a proper degree, but to enervate the mind. They indispose it for manly virtue, and introduce a tenderness of feeling ill suited to encounter the usual asperities of common life. But the study of music, under due direction, while it sweetly soothes the sense of hearing, touches the soul, and elevates and refines its nature. Conducted by philosophy, it is able to infuse the noblest thoughts, to urge to the most animated action, to calm the ruffled spirits, and co-operating with religion, to eradicate every malignant propensity.

The kind of music, however excellent as a piece of art, which penetrates no farther than the ear, produces an effect quite different from what was intended by the original invention. As a pleasure of the sense, though elegant in a high degree, it yet contributes to imbecility

seur might be enraged, is better able to produce, the genuine effects of music, lively emotions of mind, than the finest modulations of an Italian opera.

There are certain ballads and certain tunes adapted to them, which are known to almost every individual in a nation, and which please on every repetition. The music as well as the poetry of these is perfectly simple. The Scotch tunes have a sweetness which delight every ear unspoiled by the complex productions of laborious ingenuity, but which the Italian master condescends not to intermingle in his boasted compositions. And yet nothing can be more natural and easy than the sweet wild wood-notes of the Highland swain.

There are also certain psalm-tunes, which, with little merit as technical performances, are able to excite in the mind a great degree of devotional ecstasy. Those of the hundredth, and hundred-and-fourth Psalms, are the most popular music in England; and they are no less adapted to excite a spirit of piety, and elevate the soul to Heaven, than to soothe the ear by their simple melody.

There is scarcely any sentiment which may not be excited, increased, diminished, or modified, by a piece of music, simple enough to be strongly expressive. Thus powerful as well as sweet, it is to be wondered at, as well as regretted, that it should be superseded by a species of complicated harmony, ingenious, indeed, in a high degree, yet possessing little other claim to attention but as it affords an elegant amusement for a vacant hour.

Music at present often forms a considerable part of female education; and it is to be lamented, that an accomplishment, which, when properly regulated, is most efficacious in filling the young mind with virtuous and generous sentiments, should form only an innocent pastime and polite employment.

CHAPONE.

MARCH THE TENTH.

Henry V.

HENRY the Fifth possessed many eminent virtues; and, if we give indulgence to ambition in a monarch, or rank it, as the vulgar do, among his virtues, they were unstained by any considerable blemish. His abilities appeared equally in the cabinet and in the field: the boldness of his enterprises was no less remarkable than his personal valour in conducting them. He had the talent of attaching his

friends by affability, and gained his enemies by address and clemency.

The English, dazzled by the lustre of his character, still more than by that of his victories, were reconciled to the defects of his title. The French almost forgot he was an enemy; and his care of maintaining justice in his civil administration, and preserving discipline in his armies, made some amends to both nations for the calamities inseparable from those wars in which his short reign was almost wholly occupied. That he could forgive the earl of Marche, who had a better right to the crown than himself, is a sure proof of his magnanimity; and that the earl relied so entirely on his friendship, is no less a proof of his established character for candour and sincerity.

There remain, in history, few instances of such mutual trust; and still fewer, where neither found reason to repent it.

The exterior figure of this great prince, as well as his deportment, was engaging. His stature was somewhat above the middle size; his countenance beautiful; his limbs genteel and slender, but full of vigour; and he excelled in all warlike and manly exercises.

He died the 31st of August 1422, in the 34th year of his age, and in the 10th of his reign. HUME.

Henry VI.

Henry the Sixth was found dead in the Tower, in which he had been confined since the restoration of Edward.

The greater part of historians have alleged that he was assassinated by the Duke of Gloucester; while some moderns affirm that he died of grief and vexation. Henry was of a hale constitution, but just turned of fifty, naturally insensible to affliction, and hackneyed in the vicissitudes of fortune; so that we should not expect him to have died of age and infirmity, or that his life would have been affected by grief arising from his last disaster.

The suddenness of his death was suspicious, as well as the conjuncture at which he died, it being immediately after the suppression of a rebellion, which seemed to declare that Edward would never be quiet while the head of the house of Lancaster remained alive: and the suspicion of his dying a violent death is confirmed by the characters of the reigning king and his brother Richard, who were bloody, barbarous, and unrelenting.

who, without any other princely virtue or qualification, was totally free from cruelty and revenge: on the contrary, he could not without reluctance consent to the punishment of those malefactors who were sacrificed to the public safety; and frequently sustained indignities of the grossest nature, without discovering the least mark of resentment. He was chaste, pious, compassionate, and charitable; and so inoffensive, that the bishop who was his confessor for ten years, declares, that in all that time he had never committed any sin that required penance or rebuke. In a word, he would have adorned a cloister, though he disgraced a crown; and was rather respectable for those vices that he wanted, than for those virtues that he possessed.

He founded the college of Eton and Windsor, and King's College at Cambridge, for the reception of those scholars who had begun their studies at Eton.

On the morning that succeeded his death, his body was exposed at St. Paul's church, in order to prevent unfavourable conjectures; and next day sent by water to the abbey of Chertsey, where he was interred; but it was afterwards removed by order of Richard III. to Windsor, and there buried with great funeral solemnity. SMOLLETT.

MARCH THE ELEVENTH.

Early Exercise of our Faculties. (A Sunday Lesson.)

IF we be raised above the brute creation, if we be undeniably of a more excellent kind, we must be made for a different purpose: we cannot have the faculties which they want, but in order to a life different from theirs; and when our life is not such—when it is but a round of eating, drinking, and sleeping, as theirs is; when, by our idleness, we are almost on a level with them, both as to all sense of duty, and all knowledge that we possess, our time must have been grievously misemployed. There is no surer token of its having been so, than that we have done little to advance ourselves above the herd, when our Creator has endowed us with a capacity so far superior.

The creatures below us are wholly intent on the pleasures of sense, because they are capable of no other: but man is capable of much higher and nobler pleasures, he has the privilege of having a principle of reason to direct

him toward the advantages to be pursued, and a perception of a degree of excellence to be attained by him according to the powers with which he is endowed, and which the creatures below him want.

These considerations, which are of the greatest consequence to our present and future welfare, point out that we have much to do; and therefore, that the scanty term we have for it can only by a prudent management suffice for such a task.

How great a part of our time is necessarily consumed by that shorter death—our sleep! what large demands are made on the rest of it by our meals; by our justifiable recreations; by the forms and civilities to which a proper correspondence with our fellow-creatures obliges us: add to these necessary deductions, the many casual ones with which we all unavoidably meet, and it will soon appear what an exceedingly small part of our continuance upon earth, we have to bestow on such purposes of living, as alone can be of credit to us.

We are further to reflect, that in the small part of our life in which we can be employed like reasonable creatures, opportunities for doing what may be of the greatest moment do not always occur; and sometimes, if lost, are never again to be found.

We depend very much on circumstances and things without us, and over which we have no command. Nor is it only this dependence which requires us so carefully to watch our opportunities of improvement; we have a still more awakening call, if possible, within ourselves, from restraints to which our powers are subjected. We cannot use these when and as we please, or choose the time of life wherein to avail ourselves of our natural endowments, and to reap all the advantages designed us in them.

When we are in youth, our pliant bodies easily receive whatever mien or motion can recommend us: where is the sound so difficult our tongue cannot then be taught to express? To what speed may our feet then be brought, and our hands to what amazing dexterity! But if we be advanced to manhood before the forming us in any of these ways is attempted, our endeavours will then either be quite fruitless, or far less successful than the same endeavours would have been in our earlier years.

The very same is it with our understanding, with our will, with our passions. The season for acquiring useful truths, for subduing the evil tendency of our passions, and

action of our future lives, is limited to a few years of our continuance upon earth; and if throughout these we neglect it, error or ignorance is entailed upon us; our passions become our masters, and wrong inclinations are so rooted and confirmed in us, that they defeat all our endeavours to correct them. BOLTON.

MARCH THE TWELFTH.

The Forms and Divisions of Time.

As the form of *the year* is various among different nations, so is its beginning. The Jews, like most other nations of the East, had a civil year, which commenced with the new moon in September; and an ecclesiastical year, which commenced from the new moon in March. The Persians begin their year in the month answering to our June; the Chinese, and most of the Indians, begin it with the first moon in March; and the Greeks with the new moon that follows the longest day.

In England, the civil or legal year formerly commenced on the 25th day of March, and the historical year on the 1st of January. But since the alteration of the style, which took place in 1752, the civil year of this country has likewise begun on the 1st of January.

The changes and varieties that happen in Nature by the annual revolution of the Earth round the Sun are called the seasons. Spring begins on the 21st of March, summer on the 21st of June, autumn on the 23d of September, and winter on the 21st of December.

The principal division of the year is into parts called *months*, which are either astronomical or civil. An astronomical or natural month, is that which is measured exactly by the motion of the Earth or Moon, and is accordingly either *lunar* or *solar*.

A *lunar* month is the time the Moon takes to revolve round the Earth, which she performs in twenty-seven days seven hours forty-three minutes and eight seconds.

A *solar* month is that space of time in which the Earth runs through one of the signs of the zodiac: as the Earth constantly travels through the twelve signs in 365 days five hours, and forty-nine minutes, each solar month is found, by dividing this number by twelve, to contain thirty ~~days~~, ten hours, twenty-nine minutes, and five seconds.

Civil months are those which are framed to serve the uses of life, and approach nearly to the quantity of astronomical months either lunar or solar; being made to consist of thirty and thirty-one days alternately, except one of the twelve, February, which every fourth year has twenty-nine days, in others but twenty-eight.

The next division of time is that of months into *weeks*; each week consisting of seven parts called *days*. To these days the Pagans gave the names of the Sun, Moon, and Planets; to the first the name of the Sun, to the second of the Moon, to the third of Mars, to the fourth of Mercury, to the fifth of Jupiter, to the sixth of Venus, and to the seventh of Saturn.

A day is either artificial or natural. An artificial day is the space of time which passes between the Sun's rising and setting, or the time of his stay above the horizon. In opposition to which, the time between his setting and rising, or his stay below the horizon, is called night. A natural day comprehends both, being the time in which the sun makes one entire revolution, or, to speak more properly, the time in which the Earth revolves once about its axis. The natural day is divided into morning, noon, evening, and midnight, and consists of twenty-four hours.

The present Greeks begin to reckon their day at sun-rising, in a continued series of twenty-four hours, as did the ancient Babylonians, Persians, Syrians, and most other eastern nations. With astronomers and navigators the day commences at noon.

An *hour* is divided into sixty equal parts called *minutes*; each minute into sixty *seconds*; these again into sixty *thirds*, and so on. The Jews, Chaldeans, Arabs, and other eastern people divide the hours into a thousand and eighty scruples, eighteen of which are consequently equal to our minute.

ADAMS.

MARCH THE THIRTEENTH.

Envy and Emulation.

AT one of the celebrated schools of painting in Italy, a young man named Guidotto, produced a piece so excellent, that it gained the admiration of all the masters in the art. This performance was looked upon with very different eyes by two of his fellow-scholars.

Brunello, the elder of them, who had himself acquired

some reputation in his studies, regarded all the honour Guidotto had acquired as so much taken from himself; and longed for nothing so much as to see him lose the credit he had gained. Afraid openly to decry the merit of a work which had gained the approbation of the best judges, he threw out secret insinuations that Guidotto had been assisted in it by one or other of his masters; and he affected to represent it as a sort of lucky hit, which the reputed author would probably never equal.

Not so Lorenzo. Though a very young proficient in the art, he comprehended in its full extent the excellence of Guidotto's performance, and became one of the sincerest of his admirers. Fired with the praises he daily heard bestowed on Guidotto, his fellow-pupil, he ardently longed to deserve the same; and placed him before his eyes as a model, which it was his highest ambition to equal. He entered with his whole soul into the career of improvement, was the first and last of all the scholars in the designing-room, and devoted to practice at home those hours, which other youths passed in amusement.

It was long before he could please himself with any of his attempts, and he was continually repeating to himself Alas, how far distant is this from Guidotto's! At length however, he had the satisfaction of becoming sensible of his progress; and having received considerable applause for one of his performances, he ventured to say to himself, — And why may not I too become a Guidotto?

Guidotto had now prepared for the anniversary of the day when prizes were awarded in the school, a piece which was to excel all he had before executed. He had just finished it on the evening before the exhibition, and nothing remained but to heighten the colours by means of a transparent varnish. The malignant Bruncello contrived artfully to convey into the phial containing this varnish, some drops of a caustic preparation, the effect of which would be entirely to destroy the beauty and splendour of the piece. Guidotto laid it on by candle-light, and then with great satisfaction hung up his picture in the public room against the morrow. Lorenzo, with vast application, had finished a piece, which he humbly hoped might appear not greatly inferior to some of Guidotto's earlier performances.

The important day arrived. The company assembled in the great room, where the light had just been fully admitted by drawing a curtain. All went up to Guidotto's

picture: when behold, instead of the beauty which they had conceived, there was nothing but a dead surface of confused and blotched colours. The unfortunate youth burst into an agony of grief, and exclaimed that he was betrayed and undone. Lorenzo, little less affected than Guidotto himself, cried out—Gentlemen, this is not Guidotto's work: I saw it when only half finished, and it was then an exquisite performance.

Every one admired Lorenzo, and sympathised in the disgrace of Guidotto: but it was impossible to adjudge the prize to his picture, in the state in which they beheld it. It was therefore awarded to Lorenzo, who immediately presented it to Guidotto, saying, Take what merit you would have acquired, had not the basest malice and envy defrauded you of it. If hereafter I may aspire to equal you, it shall be by means of fair competition, not by the aid of treachery.

Lorenzo's noble conduct excited the warmest encomiums among the judges, who at length determined that for this time there should be two equal prizes distributed; for, if Guidotto had deserved the prize of painting, Lorenzo was entitled to that of virtue.

BARBAULD.

MARCH THE FOURTEENTH.

The Science of Botany.

THERE is in vegetables, as well as in animals, a distinction of sexes. The generality of flowers have been discovered to be hermaphrodite, that is, to contain within them the characters of both sexes: in one class of vegetables the sexes are divided, and allotted to different flowers on the same plant; in another class, the male flowers grow all upon one plant, and the female upon another.

The honour of having first suggested the true sexual distinction in plants is due to Sir Thomas Millington, the learned Savilian professor; from whose hints Dr. Grew was led to his observations on this subject, in his *Anatomy of Plants*. After this, Moreland and Bradley among the English; Camerarius and Blair among the Scots; and Geoffroy, Vaillant, and Jussieu, among the French; pursued their researches and experiments with such success, as to ascertain this discovery beyond the possibility of doubt. And, finally, Sir Charles Linnæus founded on this

discovery that system of botany which is now universally received.

The constituent parts of a perfect flower are SEVEN in number. The first is called the *calyx*, empalement, or cup; it is the termination of the outer bark of the plant, which, after accompanying the trunk or stem through all its branches, breaks out with the flower.

The second object is the *corolla*, or foliation, which is the termination of the inner bark continued to, and accompanying, the fructification, in this new form of painted leaves. The leaves of which the corolla consists are called petals, to distinguish them from the green leaves of the plant with which they might otherwise be confounded.

The *stamina* form the third constituent part in flowers. Each single stamen consists of two parts; first, the filament, or thread, vulgarly called the chive, which serves to elevate the anthera, apex, or summit, and at the same time connects it with the flower; secondly, the anthera itself, which contains within it the fertilizing dust, and, when come to maturity, discharges the same. The pollen is a fine dust, secreted within the anthera, and destined for the impregnation of the germen or bud. It is, indeed, the immediate organ of fertilization in the seed of plants; and where this is wanting to fertilize the seed, such seed will never produce a plant.

The fourth part of a flower is the *pistil*, and is a very essential one. It consists of three parts; 1. the germen, or bud, which is the rudiment of the fruit, accompanying the flower, but not yet arrived at maturity; 2. the style, which is the part that serves to elevate the stigma from the germen; and, 3. the stigma, which is the summit of the pistil, and covered with a moisture for the breaking of the pollen.

The fifth part of a flower is the *pericarpium*, or seed-vessel, which is the germen grown to maturity. They have several scientific names, corresponding to their respective natures, whether they be pods, legumes, nuts, apples, berries, &c.

The *seed*, which is the sixth part of a flower, is the natural offspring of the flower, and that for whose production all its parts seem intended; so that when this is once well formed, the several parts of the flower dwindle and disappear.

The seventh and last part is the *receptacle*, which is the base, ~~that~~ connects the other six parts of fructification.

MARCH THE FIFTEENTH.

Edward IV.

EDWARD IV. was a prince more splendid and showy than either prudent or virtuous; brave, though cruel; addicted to pleasure, though capable of activity in great emergencies; and less fitted to prevent ills by wise precautions, than to remedy them, after they took place, by his vigour and enterprise.

Edward V.

Immediately after the death of Edward IV. his son was proclaimed king of England, by the name of Edward V. though that young prince was but just turned of twelve years of age, never received the crown, or exercised any function of royalty; so that the interval between the death of his father and the usurpation of his uncle, the duke of Gloucester, afterward Richard III. was properly an interregnum, during which the uncle took his measures for wresting the crown from his nephew

Richard III.

The historians who favour Richard III. for even *he* has met with partisans among the later writers, maintain that he was well qualified for government, had he legally obtained it; and that he committed no crimes, but such as were necessary to procure him possession of the crown. But this is a poor apology, when it is confessed that he was ready to commit the most horrid crimes, which appeared necessary for this purpose; and it is certain that all his courage and capacity, qualities in which he really seems not to have been deficient, would never have made compensation to the people for the danger of the precedent, and for the contagious example of vice and murder exalted upon the throne.

Henry VII.

The reign of Henry VII. was in the main fortunate for his people at home, and honourable abroad. He put an end to the civil wars with which the nation had long been harassed: he maintained peace and order in the state; he depressed the former exorbitant power of the nobility; and, together with the friendship of some foreign princes, he acquired the consideration and regard of all.

He loved peace, without fearing war; though agitated with continual suspicions of his servants and ministers, he

discovered no timidity, either in the conduct of his affairs, or in the day of battle ; and, though often severe in his punishments, he was commonly less actuated by revenge than by maxims of policy.

His capacity was excellent, but somewhat contracted by the narrowness of his heart ; he possessed insinuation and address, but never employed the talents, except where some great point of interest was to be gained ; and while he neglected to conciliate the affections of his people, he often felt the danger of resting his authority on their fear and reverence alone. He was always extremely attentive to his affairs ; but possessed not the faculty of seeing far into futurity ; and was more expert at providing a remedy for his mistakes, than judicious in avoiding them.

Avarice was, on the whole, his ruling passion ; and he remains an instance, almost singular, of a man placed in a high station, and possessed of talents for great affairs, in whom that passion predominated above ambition. Even among private persons avarice is commonly nothing but a species of ambition, and is chiefly incited by the prospect of that regard, distinction, and consideration, which attend on riches. He died April the 12th, 1509, aged 52, having reigned 23 years.

HUME.

MARCH THE SIXTEENTH.

Examples of Filial Affection.

AMONG the incredible number of persons who were proscribed under the second triumvirate of Rome, were the celebrated orator Cicero, and his brother Quintus. When the news of the proscription was brought to them they endeavoured to make their escape to Brutus in Macedon. They travelled together some time, mutually condoling their bad fortune : but as their departure had been very precipitate, and they were not furnished with money and other necessaries for their voyage, it was agreed that Cicero should make what haste he could to the sea-side to secure their passage, and Quintus return home to make more ample provision.

But, as in most houses, there were as many informers as domestics, his return was immediately known, and the house of course filled with soldiers and assassins. Quintus concealed himself so effectually, that the soldiers could not find him : enraged at their disappointment, they put his son to the torture, in order to make him discover the

place of his father's concealment; but filial affection was proof in the young Roman against the most exquisite torments. An involuntary sigh, and sometimes a deep groan, was all that could be extorted from the heroic youth. His agonies were increased, but with amazing fortitude he still persisted in his resolution of not betraying his father.

Quintus was not far off; and hearing the sighs and groans of his son, he rushed from his place of concealment, threw himself before the assassins, begging them with a flood of tears to put him to death, and dismiss his innocent child. The inhuman monsters without being in the least affected by the sufferings of the son, or tears of the father, answered that they both must die; the father because he was proscribed, and the son because he had concealed his father. Then a new contest arose who should die first; but this the assassins soon decided, beheading both at the same instant.

PLUTARCH.

The conduct of the young Appius during the same proscription is worthy of being recorded. His aged father Appius, seeing himself proscribed, did not think what remained of a languishing life worth preserving, and was willing to await the murderers quietly in his own house.

He could not, however, resist the pressing instances and zeal of his son, who took him on his shoulders, and went through the city, unknown to some, and commanding the respect of others, by the beauty of so commendable an action. As soon as they got out of Rome, the son, sometimes assisting his father to walk, and sometimes carrying him when the fatigue was too great, conducted him to the sea, and conveyed him safe into Sicily.

The people preserved the remembrance of this affectionate conduct, and on his return to Rome, after the triumvirs had put a stop to the proscription, all the tribes unanimously concurred in raising him to the ædileship. But the goods of his father having been confiscated, he had not money to defray the expense of the shows belonging to that office; on which account, the artificers charged nothing for their labour, and the people taxing themselves willingly, each according to his ability, not only enabled him to defray the expense of the usual sports, but to purchase an estate of twice the value of that which he had lost.

APPIAN.

MARCH THE SEVENTEENTH.

Of the Lion.

WE are not to be surprised that an animal so majestic, and in every respect so terrible as the lion, should in all ages have attracted the attention of travellers, and of those who delight in the exercise of the chase; and at the same time have given rise to innumerable exaggerated and fabulous narratives. It has supplied images to poets and orators; and the fables, from their frequent repetition, have been admitted into the writings of naturalists; and been afterwards considered as founded in fact, by those who have had no opportunity of observing the animals themselves, and who have not had discrimination sufficient to judge correctly of the assertions of others.

It is certain, however, that in those countries which lions chiefly inhabit, their numbers were vastly greater in former times than they are at present. It is hardly to be conceived how, otherwise, the Romans were able to procure the prodigious number of these animals, which from time to time they exhibited in their public shows. Sylla, in his pretorship, had a hundred lions, all males, to fight at the same time; Pompey afterwards six hundred, (of which three hundred and fifty were males,) and Cæsar four hundred. This great supply of lions afforded good opportunities for taming and domesticating some of the species; and in consequence their education was carried to such a perfection as to be truly astonishing.

Hanno, a Carthaginian, was the first who tamed a lion; and he was condemned to death for what his fellow-citizens considered so great a crime; they asserted that the republic had to fear the worst consequences from a man who had been able to subdue so much ferocity. A little more experience, however, convinced them of the fallacy of that ridiculous judgment. The triumvir Antony, accompanied by an actress, was publicly drawn by lions in a chariot.

It is not wonderful that the ancients who saw so much of these animals, should, in many respects, have been better acquainted with them than we are: and that many facts which now astonish us, did not escape their observation. Such, among others, is the facility with which a lion, in captivity, will attach himself to companions, even though of a different species. A Greek writer on Natural History, informs us, that a lion, a dog, and a bear,

lived together in the greatest familiarity. The attachment between the first two was even tender. The dog in one of his frolics, having by accident bitten the bear, the natural ferocity of that animal returned, and he tore the offender to pieces: but the lion revenged the death of his favourite by immediately destroying the bear.

It is not yet agreed, what age the lion will live. Buffon believes the natural duration of his life to be rather more than twenty-five years; but in the Tower of London lions have been kept which were known to be between sixty and seventy years old.

The keepers of the animals in the Tower, and at Exeter 'Change, London, assert, that no person can with safety approach the lions while they are eating. Instances, however, have occurred in which dogs kept in the same den have been allowed by the magnanimous beasts to partake of their food. The lion Hector, kept at Exeter 'Change, was so tame as to permit the keeper to enter his den and play with him; but the man was never so rash as to attempt any familiarities during the time of his feeding. This animal was so much attached to his keeper, that during the man's absence, occasioned by illness, he refused a considerable part of his food, and exhibited symptoms of the greatest uneasiness. As soon as the man recovered and went to the den, the animal seemed overjoyed at the re-appearance of his friend, and from that time took his food as usual.

No instances have occurred in this country of lions having allowed any other animals except dogs to live with them. The lion called Hector, now in the Tower, had a rabbit, and at another time a cat, put into the den with him, by way of experiment, but he destroyed them both.

MARCH THE EIGHTEENTH.

Necessity of good Principles in early Life.

(A Sunday Lesson.)

To enable a young man to form a plan of conduct to which he may safely adhere through the whole course of life, two things are requisite: First, that he acquire a clear idea of the nature, and establish a full conviction of the obligations of morality and religion; secondly, that he study his own particular capacity, temper, relations, and condition in life. The former is necessary, as the basis of

every genuine virtue; the latter, as the means of defending him against seduction, and giving consistency and stability to his character.

Let his first concern, then, be to know what is good, and why it is so. Let him consult his own understanding and feelings, and observe the events which happen in the world, to learn what course of conduct is in the nature of things wise, proper, and right, in a human being. Let him study his own powers and inclinations, in order to judge in what manner his time and faculties may be most advantageously employed. Let him search into the hidden recesses of his own heart, to explore every latent propensity towards any kind of criminal indulgence. Let him scrutinise, with the utmost attention, the particular cast of natural temper by which he is distinguished. Let him carefully observe what habits have already gained the firmest hold upon his mind; that, discovering the feeble side of his virtue, he may learn toward what points he ought principally to direct his vigilance and circumspection.

Let him, moreover, attend to the several relations in which he stands to society; and survey the advantages and opportunities which his natural or acquired talents, his wealth or influence, afford him of doing good; that he may acquire a proper sense of the obligations which these circumstances lay him under to active exertions in the service of mankind.

In this manner let every young person, as soon as he arrives at years of discretion, make his entrance into the world — with deliberate meditations on the scene which lies before him; with serious reflections on the importance of human life; with rational principles of morals and religion; with a prudent and well-digested plan of life; and with determined resolution to adhere to that path which his reason and judgment have led him to choose, as the path of safety and happiness. He will then pursue his journey through life in a steady course of manly virtue, unseduced by the allurements which may assault him on the right hand and on the left.

In the midst of the applause of the wise and good among his fellow-creatures, surrounded with the fruits of his early virtues, and triumphing in the consciousness of having made a wise and happy choice, he will go on his way rejoicing, and will experience the path of the just to be “as the shining light which shineth more and more unto the perfect day.”

ENFIELD.

MARCH THE NINETEENTH.

On the Power of raising the Hand to the Head.

THE wisdom of the Creator in the construction of animal bodies is seen, not so much in the separate as in the collective action of the bones, muscles, and their vessels; in their mutual subserviency and dependence; in their contributing *together* to one effect and one use.

It has been said, that a man cannot lift his hand to his head, without finding reason enough to convince him of the existence of a God. And it is well said; for he has only to reflect, familiar as this action is, and simple as it seems to be, how many things are requisite for the performing of it; first, a long, hard, strong cylinder, in order to give to the arm its firmness and tension; but which, being rigid, and in its substance inflexible, can only turn upon joints.

Secondly, therefore, joints for this purpose, one at the shoulder to raise the arm, another at the elbow to bend it: these joints continually fed with a soft mucilage, to make the parts slip easily upon one another, and held together by strong braces to keep them in their position: then, thirdly, strings and wires, that is, muscles and tendons artificially inserted for the purpose of drawing the bones in the directions in which the joints allow them to move.

Hitherto we understand the mechanism pretty well; yet we have hitherto only a machine standing still; a dead organization; an apparatus. To put the system into a state of activity, to set it at work, a further provision is necessary; viz. a communication with the brain by means of nerves. We know the existence of this communication, because we can see the communicating threads, and can trace them to the brain; its necessity we also know, because if the thread be cut, if the communication be intercepted, the muscle becomes paralytic: but beyond this we know little, the organization being too minute and subtle for our inspection.

To what has been enumerated, as officiating in the single act of a man's raising his hand to his head, must be added likewise, all that is necessary, and all that contributes to the growth, nourishment, and sustentation of the limb, the repair of its waste, the preservation of its health, and

All these share in the result ; join in the effect : and how all these or any of them come together without a designing, disposing intelligence, it is utterly impossible to conceive.

PALEY.

MARCH THE TWENTIETH.

The Folly of Anger.

THE maxim of Periander of Corinth, one of the seven sages of Greece, left as a memorial of his knowledge and benevolence, was, *Be master of thy anger*. He considered anger as the great disturber of human life, the chief enemy both of public happiness and private tranquillity, and thought that he could not lay on posterity a stronger obligation to reverence his memory, than by leaving them a salutary caution against this outrageous passion.

There is in the world a certain class of mortals, known, and contentedly known, by the appellation of *passionate men*, who imagine themselves entitled by this distinction to be provoked on every slight occasion, and to vent their rage in vehement and fierce vociferations, in furious menaces, and licentious reproaches.

Men of this kind are not always treated with the severity which their neglect of the case of all about them might justly provoke ; they have obtained a kind of prescription for their folly, and are considered by their companions as under a predominant influence that leaves them not masters of their conduct or language, as acting without consciousness, and rushing into mischief with a mist before their eyes : they are therefore pitied rather than censured, and their sallies are passed over as the involuntary blows of a man agitated by the spasms of a convulsion.

It is surely not to be observed without indignation, that men may be found of minds mean enough to be satisfied with this treatment ; wretches who are proud to obtain the privilege of madmen, and can, without shame and without regret, consider themselves as receiving hourly pardons from their companions, and giving them continual opportunities of exercising their patience and boasting their clemency.

Pride is undoubtedly the origin of anger ; but pride, like every other passion, if it once break loose from reason, counteracts its own purposes. A passionate man, upon the review of his day, will have very few gratifications to offer to his pride, when he has considered how his out-

rages were borne, and in what they are likely to end at last.

These sudden bursts of rage generally break out upon small occasions; for life, unhappy as it is, cannot supply great evils as frequently as the man of fire thinks it fit to be enraged; therefore the first reflection upon his violence must show him that he is mean enough to be driven from his post by every petty incident, that he is the mere slave of casualty, and that his reason and virtue are in the power of the wind.

One motive there is of these loud extravagancies, which a man is careful to conceal from others, and does not always discover to himself. He that finds his knowledge narrow, and his arguments weak, is sometimes in hope of gaining that attention by his clamours which he cannot otherwise obtain, and is pleased with remembering, that at least he made himself heard, that he had the power to interrupt those whom he could not confute, and suspend the decision which he could not guide.

But it does not appear that a man can by uproar and tumult alter any one's opinion of his understanding, or gain influence, except over those whom fortune or nature has made his dependants. He may fright his children or harass his servants, but the rest of the world will look on and laugh; and he will at length perceive that he lives only to raise contempt and hatred, and that he has given up the felicity of being loved, without gaining the honour of being revered.

When a man has once suffered his mind to be thus vitiated, he becomes one of the most hateful and unhappy of beings. He can give no security to himself that he shall not at the next interview alienate, by some sudden transport, his dearest friend; or break out, upon some slight contradiction, into such terms of rudeness as can never be perfectly forgotten. Whoever converses with him lives with the suspicion and solicitude of a man who plays with a tame tiger, always under a necessity of watching the moment in which the capricious savage shall begin to growl.

It is related by Prior, of the duke of Dorset, that his servants used to put themselves in his way when he was angry; because he was sure to recompense them for any indignities which he made them suffer. This is the round of a passionate man's life; he contracts debts when he is furious, which his virtue, if he has any, obliges him to

discharge at the return of reason. He spends his time in outrage and acknowledgment; in injury and reparation.

Nothing is more miserable or despicable than the old age of a passionate man; his rage sinks by decay of strength into habitual peevishness; the world falls off from around him, and he is left to prey upon his own heart in solitude and contempt. JOHNSON.

MARCH THE TWENTY-FIRST.

Of Comets.

BESIDES the primary and secondary planets, there are other bodies which revolve round the Sun, and consequently make a part of the solar system. These are called *comets*, and appear occasionally in every part of the heavens. Descending from the far distant parts of the system with great rapidity, they surprise us with the singular appearance of a train, or tail, which accompanies them; become visible to us in the lower parts of their orbits; and, after a short stay, go off again to vast distances, and disappear. Though some of the ancients had more just notions of them, yet the opinion having prevailed, that they were only meteors generated in the air, like to those we see in it every night, and in a few moments vanishing, no care was taken to observe or record their phenomena accurately till of late. Hence this part of astronomy is still imperfect.

The general doctrine is, that they are solid compact bodies, like other planets, and regulated by the same laws of gravity, or transferred motion, so as to describe equal areas in proportional times by radii drawn to the common centre. They move about the Sun in very eccentric ellipses, and are of much greater density than the Earth; for some of them are heated in every period to such a degree as would vitrify or dissipate any substance known to us. Sir Isaac Newton computed the heat of the comet that appeared in the year 1680, when nearest the Sun, to be 2000 times hotter than red-hot iron, and that, being thus heated, it must retain its heat till it comes round again, although its period should be more than 20,000 years; and it is computed to be only 575.

The number of comets is much greater than that of the planets which move in the vicinity of the Sun. From

reports of historians, as well as from the observations of late years, it has been ascertained that more than 450 were seen previous to the year 1771; and when the attention of astronomers was called to this object, by the expectation of the return of the comet of 1759, no fewer than seven were observed in the course of seven years.

From this circumstance, and the probability that all the comets recorded in ancient authors were of considerable apparent magnitude, while the smaller were overlooked, it is reasonable to conclude, that the number of comets considerably exceeds any estimation that might be made from the observations we now possess. But the number of those whose orbits are settled with sufficient accuracy to ascertain their identity, when they may appear again, is no more than fifty-nine, reckoning as late as 1771.

The orbits of most of these are inclined to the plane of the ecliptic in large angles, and the greater number of them approached nearer to the Sun than to the Earth. Their motions in the heavens are not all in the order of the signs, or direct like those of the planets; but the number whose motion is retrograde is nearly equal to that of those whose motion is direct. All which have been observed, however, have moved through the ethereal regions and the orbits of the planets, without suffering the least sensible resistance in their motions; which sufficiently proves that the planets do not move in solid orbs.

Of all the comets, the periods of three only are known with any degree of certainty, being found to return at intervals of 75, and 129, and 575 years; and of these, that which appeared in 1680 is the most remarkable. This comet, at its greatest distance, is about 11,200 millions of miles from the Sun, while its least distance from the centre of the Sun is about 490,000 miles; being less than one-third part of the Sun's semidiameter from his surface. In that part of its orbit which is nearest the Sun, it flies with the amazing velocity of 880,000 miles in an hour; and the Sun, as seen from it, appears 100 degrees in breadth, consequently 40,000 times as large as he appears to us.

EDITOR.

MARCH THE TWENTY-SECOND

Henry VIII.

It is difficult to give a just summary of this prince's qualities. He was so different from himself in different parts of his reign, that, as is well remarked by lord Herbert, his history is his best character and description. The absolute uncontrolled authority which he maintained at home, and the regard he obtained among foreign nations, are circumstances which entitle him in some degree to the appellation of a great prince; while his tyranny and barbarity exclude him from the character of a good one.

He possessed, indeed, great vigour of mind, which qualified him for exercising dominion over men; courage, intrepidity, vigilance, inflexibility; and though these qualities lay not always under the guidance of a regular and solid judgment, they were accompanied with good parts, and an extensive capacity; and every one dreaded a contest with a man, who was never known to yield or to forgive; and who, in every controversy, was determined to ruin himself or his antagonist.

A catalogue of his vices would comprehend many of the worst qualities incident to human nature: — violence, cruelty, profusion, rapacity, injustice, obstinacy, arrogance, bigotry, presumption, caprice. But neither was he subject to all these vices in the most extreme degree, nor was he at intervals altogether devoid of virtues. He was sincere, open, gallant, liberal, and capable at least of a temporary friendship and attachment. In this respect he was unfortunate, that the incidents of his times served to display his faults in their full light; the treatment he met with from the court of Rome provoked him to violence; the danger of a revolt from his superstitious subjects seemed to require the most extreme severity. But it must at the same time be acknowledged, that his situation tended to throw an additional lustre on what was great and magnanimous in his character.

The emulation between the emperor and the French king rendered his alliance, notwithstanding his impolitic conduct, of great importance in Europe. The extensive powers of his prerogative, and the submission, not to say slavish disposition, of his parliament, made it more easy for him to assume and maintain that entire dominion, by which his reign is so much distinguished in the English history.

It may seem a little extraordinary, that notwithstanding his cruelty, his extortion, his violence, his arbitrary administration, this prince not only acquired the regard of his subjects, but never was the object of their hatred; he seems even, in some degree, to have possessed to the last their love and affection.

His exterior qualities were advantageous, and fit to captivate the multitude: his magnificence and personal bravery rendered him illustrious in vulgar eyes; and it may be said with truth, that the English in that age were so thoroughly subdued, that, like eastern slaves, they were inclined to admire even those acts of violence and tyranny which were exercised over themselves and at their own expense.

Henry VIII. died on the 28th of January, 1547, in the 57th year of his age, and the 37th of his reign. HUME.

MARCH THE TWENTY-THIRD.

Character of a Miser.

WHEN the light of benevolence is entirely put out, man is reduced to that state of existence, which is disavowed by nature, and abhorred of God! Let one suppose him, I say, but once radically divested of all generous feelings, and entirely involved in himself; it will be impossible to say what deeds of shame and horror he will not readily commit, in the balance of his perverted judgment, honour, gratitude, friendship, religion, yea, even natural affection, will all be outweighed by interest. The maxim of the Roman satirist will be his rule of life, "money at any rate."

If the plain and beaten paths of the world, diligence and frugality, will conduct him to that end, it is well: but if not, rather than fail of his object, I will be bold to say, he will plunge, without scruple or remorse, into the most serpentine labyrinths of fraud and iniquity. Whilst his schemes are unaccomplished, fretfulness and discontent will lower on his brow; when favourable, and even most prosperous, his unslaked and unsatisfied soul still thirsts for more. As he is insensible to the calamities of his fellow-creatures, so the greatest torment he can experience is an application to his charity and compassion. Should he stumble, like the Levite, on some spectacle of woe, he will, like the Levite, hasten to the other side of the way, resist the finest movements of nature, and cling to the demon of inhumanity, as the guardian angel of his happiness.

Suppose him, however, under the accidental necessity

of listening to the petition of misery ; he will endeavour to beat down the evidence of the case by the meanest shifts and evasions ; or will cry aloud, as the brutal and insensible Nabal did to the hungry soldiers of David, "Why should I be such a fool, as to give my flesh which I have prepared for my shearers, to men that I know not from whence they be?" But, admitting that a remnant of shame, for example, in the face of a congregation like this, may goad him for once to an act of beneficence, so mean and inconsiderable, so unworthy of the great concern, would it probably be, that the idol of his soul would appear more distinctly in the very relief he administers, than in the barbarous insensibility which habitually withholds it. Merciful and eternal God ! what a passion ! And how much ought the power and fascination of that object to be dreaded, which can turn the human heart into such a pathless and irreclaimable desert. Irreclaimable, I say ; for men inflamed with any other passion, even voluptuousness, the most impure and inveterate, are sometimes enlightened and reformed by the ministry of religion, or the sober and deliberate judgment of manhood and experience.

But who will say that such a wretch as I have described, in the extremity of selfishness, was ever corrected by any ordinary resource or expedient ? Who will say that he is at any time vulnerable by reproach, or, I had almost added, even convertible by grace ? No ; through every stage and revolution of life he remains invariably the same : or if any difference, it is only this, that as he advances into the shade of a long evening, he clings closer and closer to the object of his idolatry : and while every other passion lies dead and blasted in his heart, his desire for more self increases with renewed eagerness, and he holds by a sinking world with an agonising grasp, till he drops into the earth with the increased curses of wretchedness on his head, without the tribute of a tear from child or parent, or any inscription on his memory ; but that he lived to counteract the distributive justice of Providence, and died without hope or title to a blessed immortality. "Seek not your own, but every man another's wealth." KIRWAN.

MARCH THE TWENTY-FOURTH.

The Parts of Speech.

As the artificial division of language into parts of speech necessary in order to reduce its construction within

general rules, and as this act of abstraction is, without some familiar illustration, beyond the capacity of children, it is important to ascertain the means by which very young children may comprehend what is abstractly and philosophically meant by the parts of speech.

Every child who has a brother younger than himself, may be made to remember the time when his little brother began first to articulate sounds.

It may be called to his recollection that the first sounds or words uttered by his brother, were those which expressed pleasure or pain; as *oh! ch! la!* all which words, grammarians have agreed to call INTERJECTIONS. So that his brother and all other children first began to speak *Interjections*, or cries expressive of pleasure and pain; or sudden joy, or fear.

The next words, or sounds, which his brother would speak, were *papa, mamma, horse, dog, cat, brother, sister, nurse*, or the names of such persons and things as he saw the oftenest, or was most pleased with; all which words grammarians call NOUNS. For some time, therefore, his brother spoke nothing but *Interjections* or cries, and *Nouns* or names of things.

But the infant would soon begin to use other words; as, *run, fly, eat, drink, walk, laugh, cry*, which all express motion or action, and are by grammarians called VERBS. This part of speech, denominated the verb, expresses every kind of action and every mode of existence, and is the third general class of words which an infant would use. By means of the *Noun*, or name of a thing, and of the *Verb*, he would be able to say almost every thing; as,

Noun.	Verb.		Noun.	Verb.		Noun.	Verb.
fire	burns,		mamma	comes,		papa	runs.

But the infant will soon have occasion to express the sense which different nouns convey to his mind; as, *hot* fire, *kind* mamma, *good* papa, *sweet* sugar: which words *hot, kind, good, sweet*, are a new class, or part of speech, called *Adjectives*, or by some grammarians *Adnouns*, as belonging to or qualifying the noun or thing spoken of.

The next effort of the child to express himself to others, will be to qualify the verb or action; and to say, man runs *fast*, mamma comes *soon*, stroke puss *softly*; which words *fast, soon, and softly*, and all such, are the kind of words called by grammarians *Adverbs*.

The child will soon have occasion to describe the *position* of nouns, in regard to each other; as, *to* papa, *from* mamma,

behind, belong to the sixth class, or kind of words called by grammarians *PREPOSITIONS*.

To avoid the too frequent repetition of nouns in speaking, the child will soon say, instead of *brother* hurts *Alfred*, *he* hurts *me*, which word *he* is used for the noun *brother*, and *me* is used for the noun *Alfred*: the words *her* and *me*, as well as *I*, *thou*, *you*, *she*, *they*, *it*, and all such, are words used instead of nouns, and are therefore called *PRONOUNS*.

The child will now be able to express himself on all subjects, and the two parts of speech not yet described, are refinements, and not common to language in a rude state.

It frequently becomes necessary to determine, whether we speak of a particular man, or of man in general; and therefore we say, *a man* called, or *the man* called, which first implies some man or any man, *indefinitely*, and the last a particular man. The little words *a* and *the*, are called in the science of grammar, *ARTICLES*.

In a formal speech or discourse, it becomes necessary to join sentences together, and introduce words which indicate their connection with each other, all which are denominated *CONJUNCTIONS*. The word *and* is a conjunction of very frequent use, *if* is another, *tho'*, and *yet*, are others. The acquirement and judicious use of this part of speech is the last thing attained in the study of language.

It may thus be made to appear, to a class of children, that the division of language into parts of speech is perfectly natural, and they may be made to feel the force and necessity of the several divisions, by means of such a pleasant narrative, better than, by any force of abstraction, they could reduce language as it is viewed in the mass, back again to its elements.

BOSSUT'S First French Grammar

MARCH THE TWENTY-FIFTH.

On the Being of a God. (A Sunday Lesson.)

RETIRE;—The world shut out;—Thy thoughts cal
housè;—

Imagination's airy wing repress;

Lock up thy senses; Let no passions stir;

Wake all to Reason—let her reign alone;

Then, in thy soul's deep silence, and the depth

Of Nature's silence, midnight, thus inquire:

What am I? and from whence? — I nothing know,
But that I am; and, since I am, conclude
Something eternal: Had there e'er been nought,
Nought still had been: Eternal there must be. —

But what eternal? — Why not human race?

And Adam's ancestors without an end? —

That's hard to be conceiv'd; since ev'ry link

Of that long-chain'd succession is so frail;

Can every part depend, and not the whole?

Yet grant it true; new difficulties rise;

I'm still quite out at sea: nor see the shore.

Whence Earth; and these bright orbs? — Eternal too? —

Grant matter was eternal: still these orbs

Would want some other Father — much design

Is seen in all their motions, all their makes:

Design implies intelligence, and art:

That can't be from themselves — or man; that art,

Man can scarce comprehend, could man bestow?

And nothing greater yet allowed than man. —

Who motion, foreign to the smallest grain,

Shot through vast masses of enormous weight?

Who bid brute matter's restive lump assume

Such various forms, and gave it wings to fly?

Has matter innate motion? Then each atom,

Asserting its indisputable right

To dance, would form a universe of dust.

Has matter none? Then whence these glorious forms,

And boundless flights, from shapeless and repos'd?

Has matter more than motion? Has it thought,

Judgment, and genius? Is it deeply learn'd

In mathematics? Has it fram'd such laws,

Which but to guess, a Newton made immortal.

If art, to form; and counsel, to conduct;

And that with greater far than human skill,

Reside not in each block; — a GODHEAD reigns.

And, if a GOD there be, that GOD how great! YOUNG

MARCH THE TWENTY-SIXTH.

On Truth and Sincerity.

TRUTH and reality have all the advantages of appearance, and many more. If the show of any thing be good, I am sure sincerity is better: for why does any man dis-

he thinks it good to have such a quality as he pretends to? for to counterfeit and dissemble is to put on the appearance of some real excellency. Now the best way for a man to seem to be any thing, is really to be what he would seem to be.

It is hard to personate and act a part long; for where truth is not at the bottom, nature will always be endeavouring to return, and will peep out and betray herself one time or other. Therefore, if any man think it convenient to seem good, let him be so indeed, and then his goodness will appear to every body's satisfaction; so that, upon all accounts, sincerity is true wisdom.

Particularly as to the affairs of this world, integrity has many advantages over all the fine and artificial ways of dissimulation and deceit; it is much the plainer and easier, much the safer and more secure way of dealing; it has less of trouble and difficulty, of entanglement and perplexity, of danger and hazard in it; it is the shortest and nearest way to our end, carrying us thither in a straight line, and will hold out and last longest.

The arts of deceit and cunning continually grow weaker and less effectual to them that use them; while integrity gains strength by use; and the more and longer any man practises it, the greater service it does him, by confirming his reputation, and encouraging others to repose the greatest trust and confidence in him; which is an unspeakable advantage in the business and affairs of life.

Truth is always consistent with itself, and needs nothing to help it out: it is always near at hand, sits upon our lips, and is ready to drop out before we are aware: a lie is troublesome, and sets a man's invention upon the rack; and one trick needs a great many more to make it good. It is like building upon a false foundation, which continually stands in need of props to shore it up, and proves at last more chargeable, than to have raised a substantial building at first upon a true and solid foundation. Sincerity is firm and substantial: there is nothing hollow or unsound in it; and, because it is plain and open, it fears no discovery. Of this the crafty man is always in danger, and when he thinks he walks in the dark, all his pretences are so transparent, that he that runs may read them: he is the last man that finds himself to be found out; and while he takes it for granted that he makes fools of others, he renders himself ridiculous.

... Add to all this, sincerity is the most compendious wis-

dom, and an excellent instrument for the speedy dispatch of business; by creating confidence in those we have to deal with, it saves the labour of many inquiries, and brings things to an issue in few words; it is like travelling in a plain beaten road, which commonly brings a man sooner to his journey's end than by-ways, in which men often lose themselves. In a word, whatever convenience may be thought to be in falsehood and dissimulation, it is soon over; but their inconvenience is perpetual, because they bring a man under an everlasting jealousy and suspicion, so that he is not believed when he speaks truth, or trusted perhaps when he means honestly. When a man has once forfeited the reputation of his integrity, he is set fast, and nothing will then serve his turn, neither truth nor falsehood.

ADDISON.

MARCH THE TWENTY-SEVENTH.

The Choice of Hercules

WHEN Hercules was in that part of his youth in which it was natural for him to consider what course of life he ought to pursue, he one day retired into a desert, where the silence and solitude of the place very much favoured his meditations.

As he was musing on his present condition, and very much perplexed in himself on the state of life which he should choose, he saw two women of a larger stature than ordinary approaching toward him.

One of them had a very noble air, and graceful deportment; her beauty was natural and easy, her person clean and unspotted, her eyes cast toward the ground with an agreeable reserve, her motion, and behaviour full of modesty, and her raiment as white as snow.

The other had a great deal of health and floridness in her countenance, which she had helped with an artificial white and red; and she endeavoured to appear more graceful than ordinary in her mien, by a mixture of affection in all her gestures. She had a wonderful confidence and assurance in her looks, and all the variety of colours in her dress, that she thought were the most proper to show her complexion to advantage. She cast her eyes upon herself, then turned them on those that were present, to see how they liked her, and often looked on the figure she made in her own shadow. Upon her nearer approach

forward with a regular composed carriage, and, running up to him, accosted him after the following manner :

My dear Hercules, I find you are very much divided in your thoughts upon the way of life that you ought to choose: be my friend, and follow me; I will lead you into the possession of pleasure, and out of the reach of pain, and remove you from all the noise and disquietude of business. The affairs of either war or peace shall have no power to disturb you. Your whole employment shall be to make your life easy, and to entertain every sense with its proper gratifications. Sumptuous tables, beds of roses, clouds of perfumes, concerts of music, crowds of beauties, are all in readiness to receive you. Come along with me into this region of delights, this world of pleasure, and bid farewell for ever to care, to pain, to business.

Hercules hearing the lady talk after this manner, desired to know her name: to which she answered, My friends, and those who are well acquainted with me, call me Happiness: but my enemies, and those who would injure my reputation, have given me the name of Pleasure.

By this time the other lady was come up, and addressed herself to the young hero in a very different manner: — Hercules, said she, I offer myself to you, because I know you are descended from the gods, and give proofs of that descent, by your love to virtue, and application to the studies proper for your age. This makes me hope that you will gain, both for yourself and me, an immortal reputation. But before I invite you into my society and friendship, I will be open and sincere with you: and must lay this down as an established truth, that there is nothing truly valuable which can be purchased without pains and labour. The gods have set a price upon every real and noble pleasure. If you would gain the favour of the Deity, you must be at the pains of worshipping him; if the friendship of good men, you must study to oblige them; if you would be honoured by your country, you must take care to serve it: in short, if you would be eminent in war or peace, you must become master of all the qualifications that can make you so. These are the only terms and conditions upon which I can promise happiness.

The Goddess of Pleasure here broke in upon her discourse: You see, said she, Hercules, by her own confession, the way to her pleasures is long and difficult; whereas that which I propose is short and easy.

Alas! said the other lady, whose visage glowed with a mixture of scorn and pity, What are the pleasures you propose? To eat before you are hungry, drink before you are athirst, sleep before you are tired; to gratify appetites before they are raised, and raise such appetites as nature never planted. You never heard the most delicious music, which is the praise of yourself; or saw the most beautiful object, which is the work of your own hands. Your votaries pass away their youth in a dream of mistaken pleasures; while they are hoarding up anguish, torment, and remorse, for old age.

As for me, I am the friend of the gods, and of good men; an agreeable companion of the artisan; a household-guardian to the fathers of families; a patron and protector of servants; an associate in all true and generous friendships. The banquets of my votaries are never costly but always delicious; for none eat or drink at them who are not invited by hunger and thirst. Their slumbers are sound, and their wakings cheerful. My young men have the pleasure of hearing themselves praised by those who are in years; and those who are in years, of being honoured by those who are young. In a word, my followers are favoured by the gods, beloved by their acquaintance, esteemed by their country, and, after the close of their labours, honoured by posterity.

We know by the life of this memorable hero, to which of these two ladies he gave up his heart; and, I believe, every one who reads this will do him the justice to approve of his choice.

TATLER.

MARCH THE TWENTY-EIGHTH.

Of the Elephant.

THE stupendous size, strength, and sagacity of the elephant, have in all ages rendered this animal the admiration of mankind. Though possessed of power superior to every other quadruped, it is guiltless of unprovoked violence, and wanders about the woods of Asia and Africa in a state of majestic mildness. Large troops assemble together, and live in a kind of society, feeding only on vegetables.

The elephant is generally of a deep ash-coloured brown, or nearly blackish; but in some parts of India it is said

largest of all terrestrial animals, arriving at the height of twelve feet, though the more general height seems to be from nine to ten feet. They are commonly found in the midst of shady woods, being as averse to extreme heat as to cold; they delight in cool spots, near rivers, and frequently bathe themselves in the water, and even roll in the mud. They also swim with great ease.

The trunk of the elephant may justly be considered as one of the miracles of Nature; being at once the organ of respiration and the instrument by which the animal supplies itself with food: conveying whatever it eats into the mouth by its assistance. By this instrument also it drinks; first sucking up the water by the trunk, and then pouring it into the mouth. This wonderful organ is composed of a vast number of flexible rings; and consists of a double tube, with a somewhat flattened circular tip, finished with a projecting point, or fleshy moveable hook, of extreme sensibility, and with which it can pick up the smallest object at pleasure.

The trunk, being flexible in all directions, performs the office of a hand and arm. On its under surface it is somewhat flattened, and is circularly formed on the upper. At the end of the trunk are situated the nostrils. In a state of nature they use the tusks for tearing up trees, and the trunk for breaking the branches.

They are possessed of a greater degree of intelligence than most other quadrupeds; and when in a state of domestication, they may be taught to perform many operations requiring not only strength but skill. It appears from the most authentic information, that they are highly attached to those who have them under their care; that they are grateful for attention shown them, and mindful of any injury received; which they generally find some means of retaliating. The celebrated story of the tailor of Delhi is a remarkable example of the elephant's sagacity. In that city an elephant passing along the streets, put his trunk into a tailor's shop, where several people were at work; one of them pricked the end of the trunk with his needle; the elephant passed on; but, in the first dirty puddle, filled his trunk with the water, and, returning, squirted every drop among the people who had offended him, and spoiled the clothes they were at work upon.

Great care is taken by the grandees of India in the management and decoration of their elephants; which, after their daily feeding, bathing, oiling, and rubbing, are

often painted about the head and ears with various colours, and their tusks are surrounded with rings of gold or silver: and when employed in processions, &c. they are clothed in the most sumptuous trappings.

MAVOR'S *Natural History.*

MARCH THE TWENTY-NINTH.

Edward VI.

EDWARD VI. is celebrated by historians for the beauty of his person, the sweetness of his disposition, and the extent of his knowledge. By the time he had attained his sixteenth year, he understood the Greek, Latin, French, Italian, and Spanish languages; he was versed in the sciences of logic, music, and natural philosophy, and master of all theological disputes; insomuch that the famous Cardan, on his return from Scotland, visiting the English court, was astonished at the progress he had made in learning; and afterward extolled him in his works as a prodigy of nature.

Notwithstanding these encomiums, he seems to have had an ingredient of bigotry in his disposition that would have rendered him very troublesome to those of tender consciences who might have happened to differ with him in religious principles; nor can we reconcile, either to his boasted humanity or penetration, his consenting to the death of his uncle, who had served him faithfully; unless we suppose he wanted resolution to withstand the importunities of his ministers, and was deficient in that vigour of mind, which often exists independent of learning and culture.

SMOLLETT.

Queen Mary.

Mary possessed few qualities either estimable or amiable, and her person was as little engaging as her behaviour and address. Obstinacy, bigotry, violence, cruelty, malignity, revenge, tyranny; every circumstance of her character took a tincture from her bad temper and narrow understanding.

And amid that complication of vices, which entered into her composition, we shall scarcely find any virtue but sincerity; a quality which she seems to have maintained throughout her whole life: except in the beginning of her reign, when the necessity of her affairs obliged her to make some promises to the Protestants, which she

certainly never intended to perform. But in these cases a weak bigoted woman, under the government of priests, easily finds casuistry sufficient to justify to herself the violation of an engagement.

She appears also, as well as her father, to have been susceptible of some attachment of friendship; and that without caprice and inconstancy, which were so remarkable in the conduct of that monarch. To which we may add, that in many circumstances of her life she gave indications of resolution and vigour of mind; a quality which seems to have been inherent in her family.

Mary died November the 17th, A. D. 1558, in the 43d year of her age, and 6th of her reign. HUME.

MARCH THE THIRTIETH.

Account of the admirable Crichton.

VIRTUE, says Virgil, is better accepted when it comes in a pleasing form. The person of Crichton was eminently beautiful; but his beauty was consistent with such activity and strength, that in fencing he would spring at one bound upon his antagonist; and he used the sword in either hand with such force and dexterity, that scarce any one had courage to engage him.

Having studied at St. Andrews, in Scotland, he went to Paris in his twenty-first year, and affixed on the gate of the college of Navarre a kind of challenge to the learned of that university, to dispute with them on a certain day; offering to his opponents the choice of ten languages, and of all the faculties and sciences. On the day appointed, three thousand auditors assembled, when four doctors of the church and fifty ministers appeared against him; and one of his antagonists confesses that the doctors were defeated; that he gave proofs of knowledge beyond the reach of man; and that a hundred years passed without food or sleep would not be sufficient for the attainment of his learning. After a disputation of nine hours, he was presented by the president and professors with a diamond and a purse of gold, and dismissed with repeated acclamations.

From Paris he went to Rome, where he made the same challenge, and had, in the presence of the pope and cardinals, the same success. He then visited Padua, where he engaged in another public disputation, beginning his

performance with an extempore poem in praise of the city and the assembly present, and concluding with an oration equally unpremeditated in commendation of ignorance.

These acquisitions of learning, however stupendous, were not gained by the omission of any accomplishment in which it becomes a gentleman to excel. He practised, in great perfection, the arts of drawing and painting; he was an eminent performer in both vocal and instrumental music; he danced with uncommon gracefulness; and on the day after his disputation at Paris, exhibited his skill in horsemanship before the court of France, where, at a public match of tilting, he bore away the ring upon his lance fifteen times together. He excelled likewise in domestic games of less dignity and reputation; and in the interval between his challenge and disputation at Paris, he spent so much of his time at cards, dice, and tennis, that a lampoon was fixed upon the gate of the Sorbonne, directing those who would see this monster of erudition, to look for him at the tavern.

So extensive was his acquaintance with life and manners, that in an Italian comedy composed by himself, and exhibited before the court of Mantua, he is said to have personated fifteen different characters. His memory was so retentive, that, hearing an oration of an hour, he would repeat it exactly, and in the recital follow the speaker through all the variety of tone and gesticulation.

Nor was his skill in arms less than in learning, or his courage inferior to his skill. There was a prize-fighter at Mantua, who had defeated the most celebrated masters in many parts of Europe; and in Mantua had killed three who had appeared against him. Crichton, looking on his sanguinary success with indignation, offered to stake fifteen hundred pistoles, and mount the stage against him. The duke of Mantua with some reluctance consented; and on the day fixed the combatants appeared. The prize-fighter advanced with great violence and fierceness, while Crichton contented himself calmly to ward his passes, and suffered him to waste his vigour by his own fury. Crichton then pressed upon him with such force and agility, that he thrust him thrice through the body, and saw him expire. He then divided the prize he had won among the widows whose husbands had been killed.

The duke of Mantua having received such proofs of his various merit, made him tutor to his son Vincentio di Gonzaga.

tion. But his honour was of short duration; for, as he was one night, in the time of carnival, rambling about the streets with his guitar in his hand, he was attacked by six men masked, and opposed them with such vigour and address, that he dispersed them and disarmed their leader, who, throwing off his mask, discovered himself to be the prince his pupil. Crichton, falling on his knees, presented his own sword to the prince, who seized it, and instigated, as some say, by jealousy, according to others, only by drunken fury, thrust him through the heart.

The court of Mantua testified their esteem for the memory of Crichton by a public mourning, and the palaces of Italy were adorned with pictures, representing him on horseback with a lance in one hand, and a book in the other.

HAWKSWORTH.

MARCH THE THIRTY-FIRST.

Importance of a good Character.

A REGARD to ease, to interest, and to success, in the usual pursuits of wealth and ambition, may induce many to pursue an honest and honourable conduct who would not have been influenced by purer motives; but who, after they have once perceived the intrinsic excellence and beauty of such a conduct, will probably persevere in it for its own sake, and upon higher considerations.

To those who are to make their own way either to wealth or honours, a good character is usually no less necessary than address and abilities. Though human nature is degenerate, and corrupts itself still more by its own inventions, yet it usually retains to the last an esteem for excellence. But even if we are arrived at such an extreme degree of depravity as to have lost our native reverence for virtue, yet a regard to our own interest and safety, which we seldom lose, will lead us to apply for aid in all important transactions, to men whose integrity is unimpeached.

When we choose an assistant or associate in a profession, a partner, or a servant, our first inquiry is concerning his character. When we have occasion for a counsellor or attorney, a physician or apothecary, whatever we may be ourselves, we always choose to trust our property and persons to men of the best character. When we fix on the tradesmen who are to supply us with necessaries, we

are not determined by the outward sign of the lamb, or the wolf, or the fox, nor by a shop fitted up in the most elegant taste, but by the fairest reputation. Look into a daily newspaper, and you will see, from the highest to the lowest rank, how important the characters of the employed appear to the employers. After the advertisement has enumerated the qualities required in the person wanted, there constantly follows, that none need apply who cannot bring an undeniable character. Offer yourself as a candidate for a seat in parliament, be promoted to honour and emolument, or in any respect attract the attention of mankind upon yourself, and if you are vulnerable in your character, you will be deeply wounded. This is a general testimony in favour of honesty, which no writings and no practices can possibly refute.

Young men, therefore, whose moral characters are yet unfixed, and who, consequently, may render them just such as they wish, ought to pay great attention to the first steps which they take on entrance into life. They are usually careless and inattentive to this object. They pursue their own plans with ardour, and neglect the opinions which others entertain of them. By some thoughtless action or expression, they suffer a mark to be impressed upon them, which scarcely any subsequent merit can entirely erase. Every man will find some persons, who, though they are not professed enemies, yet view him with an envious or a jealous eye, and who will gladly revive and aggravate any tale which malice has invented, or to which truth has given the slightest foundation.

In this turbulent and confused scene, where our words and actions are often misunderstood, and oftener misrepresented, it is indeed difficult even for innocence and integrity to avoid reproach, abuse, contempt, and hatred. These not only hurt our interest, and impede our advancement in life, but sorely afflict the feelings of a tender and delicate mind. It is, then, the part of wisdom first to do every thing in our power to preserve an irreproachable character, and then to let our happiness depend chiefly on the approbation of our own consciences, and on the advancement of our interest in a world where liars shall not be believed, and where slanderers shall receive no countenance.

APRIL THE FIRST.

Natural Phenomena of April.

APRIL weather has become a proverbial expression for a mixture of the bright and gloomy. The pleasantness of its sunshiny days, with the delightful view of bursting blossoms and newly-opened flowers, is unequalled: but they are frequently overcast with clouds, and chilled by rough wintry blasts.

April generally begins with raw unpleasant weather the influence of the *equinoctial* storms still in some degree prevailing: but its vicissitudes of warm gleams of sunshine and gentle showers have the most powerful effects in hastening that universal springing of the vegetable tribes, whence the season of spring derives its appellation.

Early in the month, that welcome guest and harbinger of summer, the swallow, returns. The chimney or house swallow, known by its long forked tail and red breast, is first seen; and as this bird lives on insects, its appearance is a certain proof that some of that minute tribe of animals are come abroad from their winter retreats.

Birds are now busied in pairing, and building their nests, and the groves resound with all their various melody. The nightingale, that most enchanting of songsters, is heard soon after the arrival of the swallow. He sings by day as well as by night, but in the day-time his voice is drowned among the multitude of performers; in the evening it is heard alone: whence arises the common opinion, that the nightingale sings only by night.

Another of the most striking events of this month is the renewal of the note of the cuckoo, which is generally heard about the middle of April. This circumstance has commanded attention in all countries; and several rustic sayings, and the names of several plants which flower at this time, are derived from it.

The arrival of the cuckoo is regularly preceded some days by that of the wryneck, a small bird, singular in its attitudes and plumage, and which has a peculiar note or cry, easily distinguished by those who have once heard it. Other birds, which are seen among us only in the warmer months, as the redstart, whitethroat, and yellow wagtail, appear in April.

A considerable number of plants flower this month, and, with the blossoms of fruit-bearing trees and shrubs, form

a very agreeable spectacle, as well on account of their beauty, as of the promise they give of future benefits.

AIKIN.

APRIL THE SECOND

On the Character of St. John. (A Sunday Lesson.)

THAT which principally attracts our notice in the writings of St. John, and in his conduct, is a simplicity and singleness of heart, a fervent piety, an unbounded benevolence, an unaffected modesty, humility, meekness, and gentleness of disposition. These are evidently the great characteristic virtues that took the lead in his soul, and break forth in every page of his Gospel and his Epistles.

St. John's affection for his departed master and friend did not terminate with his life. It was continued after his crucifixion, to his memory, his character, and his religion. After a long life spent in teaching and suffering for Christianity, St. John concluded it with a work of infinite utility, the revision of the three Gospels already written by other disciples of Jesus Christ, and the addition of his own, to supply what they had omitted.

With this view principally he gives us several of our Saviour's discourses with his disciples, which are no where else to be met with; and it is very observable that these, as well as the many other occurrences of his life, which he introduces as supplemental to the former evangelists, are such as set his beloved master in the most amiable point of view. Of this kind are our Saviour's discourse with the woman of Samaria; the cure of the infirm man at the pool of Bethesda; the description of the good shepherd and his sheep; the affecting history of Lazarus; the condescending and expressive act of washing his disciples' feet; his inimitably tender and consolatory discourse to them just before his suffering; his most admirable prayer on the same occasion, and his pathetic recommendation of his people to St. Peter after his resurrection. These passages are to be found only in St. John's Gospel, and whoever reads them with attention, will discover in them plain indications of a heaven-directed hand.

Our Saviour has assured us, that he will consider every real Christian as united to him by closer ties than even those of friendship. This assurance is given us in one of those noble strains of eloquence, which are so common in

the sacred writings. Our Lord, being told that his mother and his brethren stood without, desiring to speak with him, stretched forth his hands toward his disciples, and said, "Behold my mother and my brethren! For whosoever shall do the will of my Father, who is in heaven, the same is my brother, my sister, and my mother."

PORTEUS.

APRIL THE THIRD.

On the Art of Public Speaking.

MUCH declamation has been employed to convince the world of a very plain truth, that to be able to speak well is an ornamental and useful accomplishment. Every one will acknowledge it to be of some consequence, that what a man has hourly occasion to do, should be done well. Every private company, and almost every public assembly, affords opportunities of remarking the difference between a just and graceful, and a faulty and unnatural elocution; and there are few persons who do not daily experience the advantages of speaking well, and the inconveniences of speaking ill. The great difficulty is, not to prove that it is a desirable thing to be able to read and speak with propriety, but to point out a practicable and easy method, by which this accomplishment may be acquired.

Follow Nature, is certainly the fundamental law of oratory; without a regard to which all other rules will only produce affected declamation, not just elocution. And some accurate observers, judging perhaps from a few specimens of modern eloquence, have concluded, that this is the only law which ought to be prescribed; that all artificial rules are useless; and that good sense, and a cultivated taste, are the only requisites to form a good public speaker.

But it is true in the art of speaking, as well as in the art of living, that general precepts are of little use till they are unfolded, and applied to particular cases. To discover and correct those tones, and habits of speaking, which are gross deviations from nature, and as far as they prevail must destroy all propriety and grace of utterance; and to acquire a habit of reading or speaking, upon every occasion, in a manner suited to the nature of the subject, and the kind of discourse or writing to be delivered, whether it be narrative, didactic, argumentative, oratorical, collo-

quial, descriptive, or pathetic; must be the result of much attention and labour. And there can be no reason to doubt, that, in passing through that course of exercise, which is necessary to attain this end, much assistance may be derived from instruction. What are rules or lessons for acquiring this or any other art, but the observations of others, collected into a narrow compass, and digested in a natural order, for the direction of the unexperienced and unpractised learner? And what is there in the art of speaking which should render it incapable of receiving aid from precepts?

A good articulation consists in giving a clear, full, and deliberate utterance to the several simple and complex sounds. The nature of these sounds, therefore, ought to be well understood; and much pains should be taken to discover and correct those faults in articulation, which, though often ascribed to some defect in the organs of speech, are generally the consequence of inattention or bad example.

Some persons find it difficult to articulate the letter *l*; others, the simple sounds expressed by *r*, *s*, *th*, *sh*. But the instance of defective articulation which is most common, and therefore requires particular notice, is the omission of the aspirate *h*. This is an omission which materially affects the energy of pronunciation; the expression of emotion and passions often depending, in a great measure, upon the vehemence with which the aspirate is uttered. The *h* is sometimes, perversely enough, omitted where it ought to be sounded, and sounded where it ought to be omitted.—These and other similar faults may be corrected, by daily reading sentences so contrived, as frequently to repeat the sounds which are incorrectly uttered; and especially, by remarking them whenever they occur in conversation.

Other defects in articulation regard the complex sounds, and consist in a confused and clattering pronunciation of words. The most effectual methods of conquering this habit are, to read aloud passages chosen for the purpose; such, for instance, as abound with long and unusual words, or in which many short syllables come together; and to read, at certain stated times, much slower than the sense and just speaking would require.

Almost all persons who have not studied the art of speaking, have a habit of uttering their words so rapidly, that this latter exercise ought generally to be made use of

for a considerable time at first: for, where there is a uniformly rapid utterance, it is absolutely impossible that there should be strong emphasis, natural tones, or any just elocution. BLAIR.

APRIL THE FOURTH.

Queen Elizabeth.

THERE are few great personages in history, who have been more exposed to the calumny of enemies, and the adulation of friends, than Queen Elizabeth; and yet there is scarce any, whose reputation has been more certainly determined by the unanimous consent of posterity. The unusual length of her administration, and the strong features of her character, were able to overcome all prejudices; and obliging her detractors to abate much of their invectives, and her admirers somewhat of their panegyrics, have at last, in spite of political factions, and what is more, of religious animosities, produced a uniform judgment with regard to her conduct.

Her vigour, her constancy, her magnanimity, her penetration, and vigilance, are allowed to merit the highest praise, and appear not to have been surpassed by any person ~~who~~ ever filled a throne. A conduct less vigorous, less imperious, more sincere, more indulgent to her people, would have been requisite to form a perfect character. By the force of her mind she controlled all her more active and stronger qualities, and prevented them from running into excess. Her heroism was exempt from all temerity, her frugality from avarice, her friendship from partiality, her active spirit from turbulence and a vain ambition. She guarded not herself with equal care or equal success from less infirmities: the rivalry of beauty, the desire of admiration, the jealousy of love, and the sallies of anger.

Her singular talents for government were founded equally on her temper and on her capacity. Endowed with a great command of herself, she obtained an uncontrolled ascendant over her people; and while she merited all their esteem by her real virtues, she also engaged their affection by her pretended ones.

Few sovereigns of England succeeded to the throne in more difficult circumstances; and none ever conducted the government with such uniform success and felicity.

Though unacquainted with the practice of toleration, the true secret for managing religious factions, she preserved her people, by her superior prudence, from those confusions in which theological controversy had involved all the neighbouring nations : and though her enemies were the most powerful princes in Europe, the most active, the most enterprising, the least scrupulous, she was able by her vigour to make deep impressions on their states ; her own greatness meanwhile remaining untouched and unimpaired.

The wise ministers and brave warriors, who flourished under her reign, share the praise of her success ; but instead of lessening the applause due to her, they make great addition to it. They owed all of them their advancement to her choice ; they were supported by her constancy ; and with all their abilities they were never able to acquire any undue ascendant over her. In her family, in her court, in the kingdom, she remained equally mistress. The force of the tender passions was great over her, but the force of her mind was still superior : and the combat which her victory visibly cost her, serves only to display the firmness of her resolution, and the loftiness of her ambitious sentiments.

The fame of this princess, though it has surmounted the prejudices both of faction and bigotry, yet lies still exposed to another prejudice, which is more durable, because more natural ; and which, according to the different views in which we survey her, is capable either of exalting beyond measure, or diminishing the lustre of her character. This prejudice is founded on the consideration of her sex. When we contemplate her as a woman, we are apt to be struck with the highest admiration of her great qualities and extensive sagacity : but we are apt also to require some more softness of disposition, some greater lenity of temper, some of those amiable weaknesses by which her sex is distinguished.

Elizabeth died March the 24th, 1603, aged 70, having reigned 44 years, 4 months, and 8 days.

HUME.

APRIL THE FIFTH.

On the Government of the Temper.

PEEVISHNESS, though not so violent and fatal in its immediate effects, is still more unamiable than passion, and, if possible, more destructive of happiness, inasmuch as

it operates more continually. Though the fretful man, injures us less, he disgusts us more than the passionate one, — because he betrays a low and little mind, intent on trifles, and engrossed by a paltry self-love; which knows not how to bear the very apprehension of any inconvenience.

It is self-love, then, which we must combat, when we find ourselves assaulted by this infirmity; and, by voluntarily enduring inconveniences we shall habituate ourselves to bear them with ease and good humour, when occasioned by others. Perhaps this is the best kind of religious mortification; as the chief end of denying ourselves any innocent indulgences must be to acquire a habit of command over our passions and inclinations, particularly such as are likely to lead us into evil. And though the aged and infirm are most liable to this evil (and they alone are to be pitied for it), — yet we sometimes see the young, the healthy, and those who enjoy most outward blessings, inexcusably guilty of it.

The smallest disappointment in pleasure, or difficulty in the most trifling employment, will put wilful young people out of temper; and their very amusements frequently become sources of vexation and peevishness. How often have I seen a girl, preparing for a ball, or for some other public appearance, — unable to satisfy her own vanity, — fret over every ornament she put on, quarrel with her maid, with her clothes, her hair; and, growing still more unlovely as she grew more cross, be ready to fight with her looking-glass for not making her as handsome as she wished to be! She did not consider, that the traces of this ill-humour on her countenance would be a greater disadvantage to her appearance, than any defect in her dress, — or even than the plainest features, enlivened by joy and good-humour.

There is a degree of resignation necessary even to the enjoyment of pleasure; we must be ready and willing to give up some part of what ~~we~~ we could wish for, before we can enjoy that which is indulged to us. I have no doubt, that she, who frets all the while she is dressing for an assembly, will suffer still greater uneasiness when she is there. The same craving, restless vanity, will there endure a thousand mortifications, which, in the midst of seeming pleasure, will secretly corrode her heart; while the meek and humble generally find more gratification than they expected, and return home, pleased and enlivened from every scene of amusement, though they could have staid away from it with perfect ease and contentment.

CHAPONE.

APRIL THE SIXTH.

The Banian Tree, or Indian Fig.

THE banian-tree, or Indian fig, is a native of several parts of the East Indies. It has a wooden stem, branching to a great height and vast extent, with heart-shaped entire leaves ending in acute points. This tree is beautifully described by MILTON:—

There soon they chose
The fig-tree: not that kind for fruit renown'd;
But such as, at this day to Indians known
In Malabar or Decan, spreads her arms,
Branching so broad and long, that in the ground
The bending twigs take root, and daughters grow
About the mother-tree, a pillar'd shade
High over-arch'd, and echoing walks between.
There oft the Indian herdsman, shunning heat,
Shelters in cool, and tends his pasturing herds
At loop-holes cut through thickest shade.

Paradise Lost, book ix. l. 1100.

Indeed, the banian-tree is the most beautiful of Nature's productions in that genial climate, where she sports with so much profusion and variety. Some of these trees are of amazing size and great extent, as they are continually increasing, and, contrary to most other things in animal and vegetable life, seem to be exempt from decay.

Every branch from the main body throws out its own roots; at first in small tender fibres, several yards from the ground: these continually grow thicker until they reach the surface; and there striking in, they increase to large trunks, and become parent trees, shooting out new branches from the top: these in time suspend their roots, which swelling into trunks, produce other branches; thus continuing in a state of progression as long as the earth, the first parent of them all, contributes her sustenance.

The Hindoos are peculiarly fond of the banian-tree. They look upon it as an emblem of the Deity; from its long duration its out-stretching arms, and over-shadowing beneficence. They almost pay it divine honours. Near these trees the most esteemed pagodas are generally erected: under their shade the Brahmins spend their lives in religious solitude: and the natives of all casts and tribes are fond of recreating in the cool recesses, beautiful walks,

and lovely vistas, of this umbrageous canopy, impervious to the hottest beams of a tropical sun.

A remarkably large tree of this kind is distinguished by the name of Cubbeer Burr, which was given it in honour of a famous saint. It was once much larger than at present; yet what remains is about 2000 feet in circumference, measured round the principal stems; the overhanging branches, not yet struck down, cover a much larger space. The chief trunks of this single tree (which in size greatly exceed our English elms and oaks) amount to 350; the smaller stems forming into strong supporters, are more than 3000; and every one of these is casting out new branches, and hanging roots in time to form trunks, and become the parents of a future progeny.

Cubbeer Burr is famed throughout Hindostan for its great extent and beauty: the Indian armies generally encamp around it: and at stated seasons, solemn Hindoo festivals are held there, to which thousands of votaries repair. It is said that 7000 persons find ample room to repose under its shade. The English gentlemen, on their hunting and shooting parties, used to form extensive encampments, and spend weeks together under this delightful pavilion: which is generally filled with green wood-pigeons, doves, peacocks, and a variety of feathered songsters: crowded with families of monkeys performing their antic tricks: and shaded by bats of a large size, many of them measuring upwards of six feet from the extremity of one wing to the other.

This tree not only affords shelter, but sustenance to all its inhabitants; being covered amidst its bright foliage with small figs of a rich scarlet, on which they all regale with as much delight as the lords of the creation on their more various and costly fare.

APRIL THE SEVENTH.

Of the earliest ages of the World.

THE great event of the creation of the world, before which there was neither matter nor form of any thing, is placed, according to the best chronologers, in the year before Christ 4004. The sacred records fully determine the question, that the world was not eternal, and also ascertain the time of its creation with great precision.

It appears in general, from the first chapters in Genesis, that the world, before the Flood, was extremely popu-

ious; that mankind had made considerable improvement in the arts, and were become extremely vicious both in their sentiments and manners. Their wickedness gave occasion to a memorable catastrophe, by which the whole human race, except Noah and his family, were swept from the face of the earth.

The Deluge took place in the 1656th year of the world, and produced a very considerable change in the soil and atmosphere of this globe, rendering them less friendly to the frame and texture of the human body. Hence the abridgment of the life of man, and that formidable train of diseases which has ever since made such havoc in the world.—The memory of the three sons of Noah, the first founders of nations, was long preserved among their several descendants. Japhet continued famous among the western nations, under the celebrated name of Iapetus; the Hebrews paid an equal veneration to Shem, who was the founder of their race; and among the Egyptians, Ham was long revered as a divinity, under the name of Jupiter Ammon.

It appears that hunting was the principal occupation some centuries after the Deluge. The world teemed with wild beasts; and the great heroism of those times consisted in destroying them. Hence Nimrod obtained immortal renown; and, by the admiration which his courage and dexterity universally excited, was enabled to found at Babylon the first monarchy whose origin is particularly mentioned in history.

Not long after, the foundation of Ninevah was laid by Assur; and in Egypt, the four governments of Thebes, Theri, Memphis, and Tanis, began to assume some appearance of form and regularity. That these events should have happened so soon after the Deluge, whatever surprise it may have occasioned to the learned some centuries ago, need not in the smallest degree excite the wonder of the present age. We have seen from many instances the powerful effects of the principle of population, and how speedily mankind increase when that lies under no restraint.

The kingdoms of Mexico and Peru were incomparably more extensive than those of Babylon, Ninevah, and Egypt, during that early age; and yet these kingdoms are not supposed to have existed four centuries before the discovery of America by Columbus. As mankind continued to multiply on the earth, and to separate from each other, the tradition concerning the true God was ob-

literated or obscured. This occasioned the calling of Abraham to be the father of a chosen people. From this period the history of ancient nations begins to dawn.

BURNET

APRIL THE EIGHTH.

The Morning Hymn of Eve. (A Sunday Lesson.)

THESE are thy glorious works, Parent of good,
Almighty, thine this universal frame,
Thus wondrous fair; thyself how wondrous then!
Unspeakable, who sitt'st above these heavens,
To us invisible, or dimly seen
In these thy lowest works; yet these declare
Thy goodness beyond thought, and pow'r divine.
Speak ye who best can tell, ye sons of light,
Angels; for ye behold him, and with songs
And choral symphonies, day without night,
Circle his throne rejoicing; ye in heav'n,
On earth, join all ye creatures to extol
Him first, him last, him midst, and without end.
Fairest of stars, last in the train of night,
If better thou belong not to the dawn,
Sare pledge of day, that crown'st the smiling morn
With thy bright circlet, praise him in thy sphere,
While day arises, that sweet hour of prime.

Thou Sun, of this great world both eye and soul,
Acknowledge him thy greater; sound his praise
In thy eternal course, both when thou climb'st,
And when high noon hast gain'd, and when thou fall'st

Moon, that now meet'st the orient Sun, now fly'st
With the fix'd stars, fix'd in their orb that flies;
And ye five other wand'ring fires that move
In mystic dance, not without song, resound
His praise, who out of darkness call'd up light.

Air, and ye elements, the eldest birth
Of Nature's womb, that in quaternion run
Perpetual circle, multiform, and mix
And nourish all things, let your ceaseless change
Vary to our great Maker still new praise.

Ye mists and exhalations, that now rise
From hill or steaming lake, dusky or gray,
Till the Sun paint your fleecy skirts with gold,
In honour to the world's great Author rise!

Whether to deck with clouds th' uncolour'd sky,
Or wet the thirsty earth with falling show'rs,
Rising or falling, still advance his praise.

His praise, ye winds, that from four quarters blow
Breathe soft or loud; and wave your tops, ye pines,
With every plant, in sign of worship wave.
Fountains, and ye that warble, as ye flow,
Melodious murmurs, warbling tune his praise.

Join voices, all ye living souls; ye birds,
That singing up to heaven's gate ascend,
Bear on your wings and in your notes his praise.
Ye that in waters glide, and ye that walk
The earth, and stately tread, or lowly creep;
Witness if I be silent, morn or ev'n,
To hill or valley, fountain or fresh shade,
Made vocal to my song, and taught his praise.

Hail, universal Lord! be bounteous still
To give us only good; and if the night
Has gather'd aught of evil, or conceal'd,
Disperse it, as now light dispels the dark.

MILTON.

APRIL THE NINTH.

On the Sea.

THE ocean rolling its surges from clime to clime, is the most august object under the whole heaven. It is a spectacle of magnificence and terror, which fills the mind, and amazes the imagination.

Let us examine a single drop of water, only so much as will adhere to the point of a needle. In this speck an eminent philosopher computes no less than thirteen thousand globules. And if so many exist in so small a space, how many must there be in the unmeasured extent of the ocean!

It is remarkable, that sand is a more effectual barrier against the sea than rock; accordingly the sea is continually gaining upon a rocky shore, and losing upon a sandy shore, unless where it sets in with an eddy. Thus it has been gaining from age to age upon the isle of Portland, and the Land's-end in Cornwall; undermining, throwing down, and swallowing up one huge rock after another. Meantime the sandy shores, both on our southern and western coasts, gain continually upon the sea.

Beneath the boundary of rocks frequently lies a smooth level sand, almost as firm as a well-compacted causeway;

insomuch that the tread of a horse scarcely impresses it, and the waters never penetrate it. Without this wise contrivance, the searching waves would insinuate into the heart of the earth; and the earth itself would in some places be hollow as a honey-comb, in others bibulous as a sponge.

Nor are the regions of the ocean without their proper inhabitants, clothed in exact conformity to the clime; not in swelling wool or buoyant feathers, but with as much compactness and as little superfluity as possible. They are clad, or rather sheathed, in scales which adhere close, and are laid in a kind of natural oil; than which nothing can be more light, and at the same time nothing more solid. It hinders the fluid from penetrating their flesh; it prevents the cold from chilling their blood; and enables them to make their way through the waters with the utmost facility. And they have each an air-bladder, a curious instrument, by expanding or compressing which they rise to what height or sink to what depth they please.

It is impossible to enumerate the variety of the scaly herds. Among them are animals of monstrous shapes and amazing qualities. The upper jaw of the sword-fish is lengthened into a strong and sharp sword, with which, though he is not above sixteen feet long, he scruples not to engage the whale himself. The sun-fish is one round mass of flesh; only it has two fins, which act the part of oars. The polypus, with its numerous feet and claws, seems fitted only to crawl: yet an excrescence rising on the back enables it to steer a steady course through the waves. The shell of the nautilus forms a kind of boat, and he unfurls a membrane to the wind for a sail. He extends also two arms, with which, as with oars, he rows himself along. When he is disposed to dive, he strikes sail, and at once sinks to the bottom. When the weather is calm, he mounts again, and performs his voyage without either chart or compass.

Some, lodged in their shells, seem to have no higher employ than to imbibe nutriment, and are almost rooted to the rocks on which they lie; while others shoot along the yielding flood, and range the spacious regions of the deep. How various is their figure! The shells of some seem to be the rude productions of chance rather than of skill and design; yet even in these we find the nicest dispositions. Uncouth as they appear, they are exactly suited to the exigencies of their respective tenants. The

structure of others is all symmetry and elegance, and no enamel can be compared to their polish.

The mackarel, herring, and various other kinds, throng our creeks and bays; while those of enormous size and appearance, which would fright the valuable fish from our coasts, are kept in the abysses of the ocean; as wild beasts, compelled by the same over-ruling Power, hide themselves in the recesses of the forest. MONTHLY MAGAZINE.

APRIL THE TENTH.

On the Neglect of early Improvement.

THERE is not a greater inlet to misery and vices of all kinds, than the not knowing how to pass our vacant hours. For what remains to be done, when the first part of the lives of those who are not brought up to any manual employment, has slipped away without an acquired relish for reading, or taste for other rational satisfactions? — That they should pursue their pleasures? — But, religion apart, common prudence will warn them to tie up the wheel as they begin to go down the hill of life.

Shall they then apply themselves to their studies? Alas! the seed-time is already past: the enterprising and spirited ardour of youth being over, without having been applied to those valuable purposes for which it was given, all ambition of excelling upon generous and laudable schemes quite stagnates. If they have not some poor expedient to deceive the time, or, to speak more properly, to deceive themselves, the length of a day will seem tedious to those who perhaps have the unreasonableness to complain of the shortness of life in general.

When the former part of our life has been nothing but vanity, the latter end of it can be nothing but vexation. In short, we must be miserable without some employment to fix, or some amusement to dissipate, our thoughts: and as we can neither command amusement in all places, nor relish it at all times, there is an absolute necessity for employment. We may pursue this or that new pleasure; we may be fond for a while of a new acquisition; but when the graces of novelty are worn off, and the briskness of our first desire is over, the transition is very quick and sudden, from an eager fondness to a cool indifference. Hence there is a restless agitation in our minds, still craving something new, still unsatisfied with

it when possessed; till melancholy increases, as we advance in years, like shadows lengthening toward the close of day.

Hence it is, that men of his stamp are continually complaining that the times are altered for the worse; because the sprightliness of youth represented every thing in the most engaging light. When men are in high good-humour with themselves, they are apt to be so with all around them; the face of Nature brightens up, and the sun shines with a more agreeable lustre: but when old age has cut them off from the enjoyment of false pleasures, and habitual vice has given them a distaste for the only true and lasting delights; when a retrospect of their past lives presents nothing to view but one wide tract of uncultivated ground; a soul distemp'ered with spleen, remorse, and insensibility of each rational satisfaction, darkens and discolours every object. The change is not in the times, but in them who have been forsaken by those gratifications which they would not forsake.

How much otherwise is it with those who have treasured up an inexhaustible fund of knowledge! When a man has been laying out that time in the pursuit of some great and important truth, which others waste in a circle of gay follies, he is conscious of having acted up to the dignity of his nature; and from that consciousness there results that serene complacency which, though not so violent, is much preferable to the pleasures of animal life. He can travel on from strength to strength; for, in literature, as in war, each new conquest he gains empowers him to push his conquests still further, and to enlarge the empire of reason. Thus he is ever in a progressive state, still making new acquirements, still animated with hopes of future discoveries. SEED.

APRIL THE ELEVENTH.

The Torrid and Frigid Zones.

How oblique and faintly looks the sun on yonder climates, far removed from him! How tedious are the winters there. How deep the horrors of the night, and how uncomfortable even the light of day! The freezing winds employ their fiercest breath, yet are not spent with blowing. The sea, which elsewhere is scarce confined within its limits, lies here immured in walls of crystal. The snow covers

the hills, and almost fills the lowest valleys. How wide and deep it lies, incumbent over the plains, hiding the sluggish rivers, the shrubs, and trees, the dens of beasts, and mansions of distressed and feeble men!—See! where they lie confined, hardly secure against the raging cold, or the attacks of the wild beasts, now masters of the wasted field, and forced by hunger out of the naked woods.

Yet not disheartened, (such is the force of human breasts,) but thus provided for by art and prudence, the kind compensating gifts of Heaven, men and their herds may wait for a release.

For at length the sun approaching melts the snow, sets longing men at liberty, and affords them means and time to make provision against the next return of cold. It breaks the icy fetters of the main; where vast sea monsters pierce through floating islands, with arms which can withstand the crystal rock: while others, who of themselves seem great as islands, are by their bulk alone armed against all but man; whose superiority over creatures of such stupendous size and force should make him mindful of his privilege of reason, and force him humbly to adore the great Composer of these wondrous frames, and Author of his own superior wisdom.

But leaving these dull climates, so little favoured by the sun, for those happier regions, on which he looks more kindly, making perpetual summer; how great an alteration do we find! his purer light confounds weak-sighted mortals, pierced by his scorching beams. Scarce can they tread the glowing ground. The air they breathe cannot enough abate the fire, which burns within their panting breasts. Their bodies melt. Overcome and fainting, they seek the shade, and wait the cool refreshments of the night. Yet oft the bounteous Creator bestows other refreshments. He casts a veil of clouds before them, and raises gentle gales; favoured by which, the men and beasts pursue their labours; and plants, refreshed by dews and showers, can gladly bear the warmest sunbeams. SHAFTESBURY.

APRIL THE TWELFTH.

On Parental Tenderness and Filial Gratitude.

As the duty of children to parents is enjoined in the clearest manner and under the strongest sanctions, by the law of God; so it is also required by, what is indeed the law of God too, the voice of nature. reason, and humanity.

You observe how the young of animals appear to be committed by nature to the care and protection of their parents; they have continual recourse to them in their wants and fears, and conform instantly to every intimation of such lawful guides and governors. The parents accordingly, on the other hand, are in the most wonderful manner both disposed to undertake this trust, and enabled to execute it.

These ties, we see, are first formed by the hand of Nature: and the child that endeavours to break loose from this regular dependence and subjection, opposes the order instituted by Providence, and the course of things. He can find no example in any other species, to countenance his unnatural wilfulness; and the voice of every creature upon earth cries out against him, and condemns him.

But reason also in the human species is on the same side, and strengthens the ties of nature. Regard to the public and our own welfare will prescribe the same conduct, to which we are already prompted by prior motives. Nor is this argument above the capacity of those it is addressed to. Even a child may soon perceive so much, that he is not so wise as his parents: that if he follows his own fancy in opposition to their judgment, it is very likely, both that he will do mischief, and have cause himself to repent it.

For, together with the superiority of their understanding, he will observe also the tenderness of their affection. Their advice, he must soon be sensible, is sincere, and honest, and disinterested. His other counsellors (and his passions are to be reckoned among the number) may be his enemies; and generally they are at best but their own friends. But his parents, he may be very sure, will be faithful to him. Theirs are the counsels of kindness; and their reproofs the effects, and very often the best tokens, of it. There can be no difference between him and them, but about the means: the thing aimed at on both sides is the same; it is his welfare, honour, and happiness. They would be glad to gratify even his humour, but they prefer his lasting good. No consideration but the view of his advantage, could prevail with them to offend him.

This affection which your parents bear towards you, and the great good they have done you in consequence of it, give them still another title to your consideration and respect, a right to be regarded by you for their own sake. And if in some instances you were persuaded, truly too, that their counsels were not the most ad-

vantageous, this would not immediately exempt you from all obligations to comply with them. Gratitude, and some tenderness surely on your part, in return for so much on theirs, must be allowed to have weight, and come in to supply the place of more selfish considerations. Must your own satisfaction be the end of all your measures? or rather, cannot you receive satisfaction from the gratification of others? Will it afford you no pleasure, to give it to your best friends, and greatest benefactors? You may part with something, were it to the mistakes of such persons; and exchange, with no great loss, your own desires for this pleasure of pleasing. OGDEN.

APRIL THE THIRTEENTH.

James I.

No prince, so little enterprising and so inoffensive, was ever so much exposed to the opposite extremes of calumny and flattery, of satire and panegyric. And the factions which began in his time, being still continued, have caused his character to be as much disputed to this day, as is commonly that of princes who are our contemporaries.

Many virtues, however, it must be owned, he possessed; but not one of them pure, or free from the contagion of the neighbouring vices. His generosity bordered on profusion, his learning on pedantry, his pacific disposition on pusillanimity, his wisdom on cunning, his friendship on light fancy and boyish fondness.

While he imagined that he was only maintaining his own authority, he may perhaps be suspected in some of his actions, and still more of his pretensions, to have encroached on the liberties of his people.

While he endeavoured, by an exact neutrality, to acquire the good-will of all his neighbours, he was able to preserve fully the esteem and regard of none. His capacity was considerable; but fitter for discourse on general maxims, than to conduct any intricate business.

His intentions were just, but more adapted to the conduct of private life than to the government of kingdoms. Awkward in his person, and ungainly in his manners, he was ill qualified to command respect: partial and undiscerning in his affections, he was little fitted to acquire general love. Of a feeble temper more than of a frail

judgment : exposed to our ridicule from his vanity ; but exempt from our hatred by his freedom from pride and arrogance. And upon the whole, it may be pronounced of his character, that all his qualities were sullied with weakness, and embellished by humanity.

Of political courage he was certainly destitute ; and thence chiefly is derived the strong prejudice which prevails against his personal bravery : an inference, however, which must be owned, from general experience, to be extremely fallacious.

That James was but a middling writer, may be allowed : that he was a contemptible one, can by no means be admitted. Whoever will read his *Basilicon Doron*, particularly the last two books ; the *True Law of Free Monarchies* ; his *Answer to cardinal Perron* ; and almost all his speeches and messages to parliament ; will confess him to have possessed no mean genius. If he wrote concerning witches and apparitions, who, in that age, did not admit the reality of these fictitious beings ? From the grossness of its superstitions, we may infer the ignorance of an age ; but never should pronounce concerning the folly of an individual, from his admitting popular errors consecrated by the appearance of religion.

He expired on the 27th of March, 1625, after a reign over England of twenty-two years and some days : and in the fifty-ninth year of his age. His reign over Scotland was almost of equal duration with his life. In all history it would be difficult to find a reign less illustrious yet more unspotted and unblemished, than that of James, in both kingdoms.

HUME.

APRIL THE FOURTEENTH.

Of the principal Rivers in England.

THE rivers in England add greatly to its beauty, as well as to its opulence. The Thames (which, from the situation of the capital on its banks, naturally claims the first place among the rivers of England) rises on the confines of Gloucestershire, a little south-west of Cirencester ; and after receiving the many tributary streams of other rivers, it passes to Oxford, then by Abingdon, Wallingford, Reading, Marlow, and Windsor : thence to Kingston, where formerly it met the tide, which, since the building

of Westminster-bridge, is said to flow no higher than Richmond; whence it flows to London, and after dividing the counties of Kent and Essex, widens in its progress, till it falls into the sea at the Nore, from which it is navigable for large ships to London-bridge.

The Medway, which rises near Tunbridge, falls into the Thames at Sheerness, and is navigable for the largest ships as far as Chatham.

The Severn, reckoned the second river for importance in England, and the first for rapidity, rises at Plimlin-mon-Jill in North Wales; becomes navigable at Welch-pool; runs east to Shrewsbury; then, turning south, visits Bridgnorth, Worcester, and Tewkesbury, where it receives the Upper Avon: after having passed Gloucester, it takes a south-west direction; is, near its mouth, increased by the Wye and Ustre; and discharges itself into the Bristol Channel, near King-road, where lie the great ships which cannot get up to Bristol.

The Trent rises in the moorlands of Staffordshire, and, running south-east by Newcastle-under-Line, divides that county into two parts; then, turning north-east on the confines of Derbyshire, visits Nottingham, running the whole length of that county to Lincolnshire, and, being joined by the Ouse and several other rivers towards the mouth, obtains the name of the Humber, falling into the sea south-east of Hull.

The Ouse falls into the Humber after receiving the waters of many other rivers. Another Ouse rises in Bucks, and falls into the sea near Lynn in Norfolk. The Tyne runs from west to east, through Northumberland, and falls into the German Sea at Timnouth, below Newcastle. The Tees runs from west to east, dividing Durham from Yorkshire, and falls into the German Sea below Stockton.

The Tweed runs from west to east, on the borders of Scotland, and falls into the German Sea at Berwick. The Eden runs from south to north through Westmoreland and Cumberland, and, passing by Carlisle, falls into Solway Firth below that city. The Lower Avon runs west through Wiltshire to Bath, and, then, dividing Somersetshire from Gloucestershire, runs to Bristol, falling into the mouth of the Severn below that city.

The Derwent runs from east to west through Cumberland, and, passing by Cockermouth, falls into the Irish Sea a little below. The Ribble runs from east to west through Lancashire, and, passing by Preston, discharges

itself into the Irish Sea. The Mersey runs from the south-east to the north-west through Cheshire, and then, dividing Cheshire from Lancashire, passes by Liverpool, and falls into the Irish Sea a little below that town. The Dee rises in Wales, and divides Flintshire from Cheshire, falling into the Irish channel below Chester. CAPPER.

APRIL THE FIFTEENTH.

On Envy. (A Sunday Lesson.)

ENVY is almost the only vice which is practicable at all times and in every place: the only passion which can never lie quiet for want of irritation. Its effects, therefore, are every where discoverable, and its attempts always to be dreaded.

It is impossible to mention a name which any advantageous distinction has made eminent, but some latent animosity will burst out. The wealthy trader, however he may abstract himself from public affairs, will never want those who hint with Shylock, that ships are but boards; and that no man can properly be termed rich, whose fortune is at the mercy of the winds. The beauty adorned only with the unambitious graces of innocence and modesty, provokes, wherever she appears, a thousand murmurs of detraction and whispers of suspicion. The genius, even when he endeavours only to entertain with pleasing images of nature, or instruct by uncontested principles of science, yet suffers persecution from innumerable critics; whose acrimony is excited merely by the pain of seeing others pleased, of hearing applauses which another enjoys.

The frequency of envy makes it so familiar, that it escapes our notice; nor do we often reflect upon its turpitude or malignity, till we happen to feel its influence. When he that has given no provocation to malice but by attempting to excel in some useful art, finds himself pursued by multitudes, whom he never saw, with implacability of personal resentment; when he perceives clamour and malice let loose upon him as a public enemy, and incited by every stratagem of defamation; when he hears the misfortunes of his family, or the follies of his youth, exposed to the world; and every failure of conduct, or defect of nature, aggravated and ridiculed; he then learns to abhor those artifices, at which he only laughed before,

and discovers how much the happiness of life would be advanced by the eradication of envy from the human heart.

Envy is, indeed, a stubborn weed of the mind, and seldom yields to the culture of philosophy. There are, however, considerations, which, if carefully implanted and diligently propagated, might in time overpower and repress it; since no one can nurse it for the sake of pleasure, as its effects are only shame, anguish, and perturbation.

It is, above all other vices, inconsistent with the character of a social being, because it sacrifices truth and kindness to very weak temptations. He that plunders a wealthy neighbour, gains as much as he takes away, and improves his own condition in the same proportion as he impairs another's: but he that blasts a flourishing reputation, must be content with a small dividend of additional fame; so small as can afford very little consolation, to balance the guilt by which it is obtained.

I have hitherto avoided mentioning that dangerous and empirical morality, which cures one vice by means of another. But envy is so base and detestable, so vile in its original, and so pernicious in its effects, that the predominance of almost any other quality is to be desired. Let it therefore be constantly remembered, that whoever envies another, confesses his superiority; and let those be reformed by their pride, who have lost their virtue.

It is no slight aggravation of the injuries which envy incites, that they are committed against those who have given no intentional provocation; and that the sufferer is marked out for ruin, not because he has failed in any duty, but because he has dared to do more than was required.

Almost every other crime is practised by the help of some quality which might have produced esteem or love, if it had been well employed: but envy is a more unmixed and genuine evil; it pursues a hateful end by despicable means, and desires not so much its own happiness as another's misery. To avoid depravity like this, it is not necessary that any one should aspire to heroism or sanctity; but only that he should resolve not to quit the rank which nature assigns, and wish to maintain the dignity of a human being.

JOHNSON.

APRIL THE SIXTEENTH.

Sketch of London, the Metropolis of Great Britain.

LONDON, in the extensive sense of the name, (including Westminster, Southwark, and part of Middlesex,) is a city of surprising extent, of prodigious wealth, and of the most extensive trade. This city, when considered with all its advantages, is now what ancient Rome once was; the seat of liberty, the encourager of arts, and the admiration of the whole world.

London is the centre of trade; it has an intimate connection with all the counties in the kingdom; it is the grand mart of the nation, to which all parts send their commodities, whence they are again sent back into every town in the nation, and to every part of the world. Hence innumerable carriages by land and water are constantly employed; and hence arises the circulation in the national body, which renders every part healthful, vigorous, and in a prosperous condition; a circulation that is equally beneficial to the head and the most distant members.

Its length from east to west is generally allowed to be above seven miles from Hyde-park Corner to Poplar; and its breadth in some places three, in others two, and in others again, not much above half a mile. Hence the circumference of the whole is almost 18 miles; or, according to a modern measurement, the extent of continued and still increasing buildings is 35 miles, 2 furlongs, and 39 roods. But it is much easier to form an idea of the large extent of a city so irregularly built, from the number of the people, amounting, by the returns under the late Population Act, to 1,087,000; and from the number of edifices devoted to the service of religion.

Of these, besides St. Paul's cathedral, and the collegiate church at Westminster, here are 102 parish-churches and 69 chapels, of the established religion; 21 French protestant chapels; 11 chapels belonging to the Germans, Dutch, Danes, &c.; 26 independent meetings; 34 presbyterian meetings; 20 baptist meetings; 19 popish chapels, and meeting-houses for the use of foreign ambassadors, and people of various sects; and three Jews' synagogues. So that there are 305 places devoted to religious worship, in the compass of this vast pile of buildings, without reckoning the 21 out-parishes usually included in the bills of mortality, and a great number of methodist chapels.

There are in and near this city 100 alms-houses ; about 20 hospitals and infirmaries ; 3 colleges ; 10 public prisons ; 15 flesh markets ; 1 market for live cattle : 2 other markets more particularly for herbs ; and 23 other markets for corn, coals, hay, &c. ; 15 inns of court ; 37 public squares, besides those within single buildings, as the Temple, &c. ; 3 bridges ; 49 halls for companies ; 8 public schools, called free-schools ; and 131 charity-schools, which provide education for 5034 poor children.

There are also 207 inns ; 447 taverns ; 551 coffee-houses ; 5975 ale-houses ; 1200 hackney-coaches ; 402 ditto chairs ; 7000 streets, lanes, courts, and alleys ; and 130,000 dwelling-houses, containing above a million of inhabitants, who consume annually 101,000 black cattle ; 710,000 sheep ; 195,000 calves ; 240,000 swine and pigs ; 1,172,500 barrels of strong beer ; 3000 tuns of foreign wines ; and eleven millions of gallons of rum, brandy, and other distilled liquors ; with 500,000 chaldrons of coals for fuel.

PICTURE OF LONDON, 1815.

APRIL THE SEVENTEENTH.

Pleasure and Pain.

THERE were two families, which, from the beginning of the world, were as opposite to each other as light and darkness. The one of them lived in heaven, and the other in hell. The youngest descendant of the first family was Pleasure, who was the daughter of Happiness, who was the child of Virtue, who was the offspring of the Gods. These had their habitation in heaven. The youngest of the opposite family was Pain, who was the son of Misery, who was the child of Vice, who was the offspring of the Furies. The habitation of this race of beings was in hell.

The middle station of nature between these two opposite extremes was the earth, which was inhabited by creatures of a middle kind, neither so virtuous as the one, nor so vicious as the other, but partaking of the good and bad qualities of these two opposite families. Jupiter, considering that this species commonly called man, was too virtuous to be miserable and too vicious to be happy, that he might make a distinction between the good and the bad, ordered the two youngest of the above-mentioned families, Pleasure, who was the daughter of Happiness,

and Pain, who was the son of Misery, to meet one another upon this part of nature, which lay in the half-way between them, having promised to settle it upon them both, provided they could agree upon the division of it, so as to share mankind between them.

Pleasure and Pain no sooner met in their new habitation than they immediately agreed upon this point; that Pleasure should take possession of the virtuous, and Pain of the vicious part of that species which was given up to them. But upon examining to which of them any individual they met with belonged, they found each of them had a right to him: for that, contrary to what they had seen in their old places of residence, there was no person so vicious, who had not some good in him, nor any person so virtuous who had not in him some evil. The truth of it is, they generally found, upon search, that in the most vicious man, Pleasure might lay claim to an hundredth part; and that in the most virtuous man, Pain might come in at least for two-thirds.

This they saw would occasion endless disputes between them, unless they could come to some accommodation. To this end there was a marriage proposed between them, and at length concluded: by this means it is, that we find Pleasure and Pain are such constant yoke-fellows, and that they either make their visits together, or are never far asunder. If Pain come into a heart he is quickly followed by Pleasure; and if Pleasure enter, you may be sure Pain is not far off.

But, notwithstanding this marriage was very convenient for the two parties, it did not seem to answer the intention of Jupiter in sending them among mankind. To remedy therefore this inconvenience, it was stipulated between them by article, and confirmed by the consent of each family, that notwithstanding they have possessed the species indifferently, yet upon the death of every single person, if he were found to have in him a certain proportion of evil, he should be despatched into the infernal regions by a passport from Pain, there to dwell with Misery, Vice, and the Furies. Or, on the contrary, if he had in him a certain proportion of good, he should be despatched into heaven by a passport from Pleasure, there to dwell with Happiness, Virtue, and the Gods.

ADDISON.

APRIL THE EIGHTEENTH.

Various Phenomena of the Ocean.

As the natives of the deep are continually obliged to devour one another for necessary subsistence, without extraordinary recruits the whole watery race must soon be totally extinct. Were they to bring forth no more at a birth than land-animals, the increase would be far too small for the consumption. The weaker species would soon be destroyed by the stronger, and the stronger themselves must soon after perish for want of food. Therefore, to supply millions of animals with subsistence, they spawn not by scores, but by millions. A single female produces a nation. The great naturalist, Mr. Leuwenhoeck, counted in an ordinary cod 9,384,000 eggs. By this amazing expedient, constant reparation is made proportionable to the immense havoc.

And as the sea abounds with animal inhabitants, so it does also with vegetable productions; some soft as wool, others hard as stone. Some rise like a leafless shrub; some are expanded in the form of a net; some grow with their heads hanging downwards, and seem rather suspended than springing from the juttings of the rocks.

The herbs and trees on the dry land are fed by the juices that permeate the soil, and float in the air. For this purpose they are furnished with leaves to collect the one, and with roots to attract the other. Whereas the sea-plants, having sufficient nourishment in the circum-ambient waters, have no need to detach roots into the ground, or forage the earth for sustenance. Instead, therefore, of penetrating, they are but just tacked to the bottom; and adhere to some solid substance only with such a tenacity as may secure them from being tost to and fro by the agitation of the waves.

The sea is that grand reservoir which supplies the earth with its fertility; and the air and sun as the mighty engines, which work without intermission, to raise the water from this inexhaustible cistern. The clouds, as aqueducts, convey the genial stores along the atmosphere, and distribute them in seasonable and regular proportions through all the regions of the globe.

With what difficulty do we extract a drop of perfectly sweet water from this vast pit of brine! Yet the sun draws off every moment millions of tuns in vaporous exhalations, which being securely lodged in the clouds, are sent

abroad sweetened and refined, without the least brackish tincture or bituminous sediment; sent forth upon the wings of the winds to distil in dews and rains to ooze in fountains, to trickle along in rivulets, to roll from the sides of mountains, to flow in copious streams amid burning deserts and through populous kingdoms, in order to refresh and fertilise, to beautify and enrich, every soil in the clime.

How amazing are the goodness and power of the world's adorable Maker, in distributing so largely what is so extensively beneficial! that water, without which we can scarcely perform any business, or enjoy any comfort, should stream by our houses, should come from the ends of the earth, from the extremities of the ocean to serve us! that this boundless mass of fluid salt, so intolerably nauseous to the taste, should be the original spring that quenches the thirst both of man and every other species of animals! Doubtless the power by which this is effected can make all things work together for our good.

APRIL THE NINETEENTH.

Of the Winds.

THE earth on which we live is every where surrounded by a fine invisible fluid, which extends to several miles above its surface, and is called *air*. It is found by experiments, that a small quantity of air is capable of being expanded so as to fill a very large space, or of being compressed into a much smaller compass than it occupied before. The general cause of the expansion of the air is heat; that of its compression, cold. Hence, if any part of the air or atmosphere receive a greater degree of cold or heat than it had before, its parts will be put in motion, and be expanded or compressed. But when air is put in motion, we call it wind in general; and a breeze, gale, or storm, according to the quickness or velocity of that motion.

Winds, therefore, which are commonly considered as things extremely variable and uncertain, depend on a general cause, and act with more or less uniformity in proportion as the action of this cause is more or less constant. It is found, by observations made at sea, that, from thirty degrees north latitude to thirty degrees south, there is a

constant east wind throughout the year, blowing on the Atlantic and Pacific oceans, and called the *trade wind*. This is occasioned by the action of the sun, which, in moving from east to west, heats, and consequently expands, the air immediately under him; and by this means a stream or tide of air always accompanies him in his course, and occasions a perpetual east wind within these limits. This general cause, however, is modified by a number of particulars, the detail of which would be too tedious and complicated here.

The winds called the *tropical winds*, which blow from some particular point of the compass without much variation, are of three kinds: 1. The *general trade winds*, which extend to nearly thirty degrees of latitude on each side of the equator in the Atlantic, Ethiopic, and Pacific seas. 2. The *monsoons*, or shifting trade winds, which blow six months in one direction, and the other six months in the opposite. These are mostly in the Indian or Eastern Ocean, and do not extend above two hundred leagues from the land. Their change is at the vernal and autumnal equinoxes, and is accompanied with terrible storms of thunder, lightning, and rain. 3. The *sea and land breezes*, which are another kind of periodical winds, that blow from the land from midnight to noon, and from the sea from about noon till midnight; these, however, do not extend above two or three leagues from shore.

Near the coast of Guinea, in Africa, the wind blows nearly always from the west, south-west, or south. On the coast of Peru, in South America, it blows constantly from the south-west. Beyond the latitude of thirty north and south, the winds, as we daily perceive in great Britain, are more variable, though they blow oftener from the west than any other point. Between the fourth and tenth degrees of north latitude, and between the longitude of Cape Verd and that of the easternmost of the Cape Verd Islands, there is a tract of sea condemned to perpetual calms, attended with terrible thunder and lightning, and such rains, that this sea has acquired the name of *the Rains*.

APRIL THE TWENTIETH.

On Emphasis and Pauses.

By emphasis is meant that stronger and fuller sound of voice, by which, in reading or speaking, we distinguish the accented syllable of some word, on which we design to lay particular stress, in order to show how it affects the rest of the sentence. On the right management of the emphasis depends the whole life and spirit of every discourse. If no emphasis be placed on any word, not only is discourse rendered heavy and lifeless, but the meaning left often ambiguous. If the emphasis be placed wrong, we pervert and confound the meaning wholly.

To give a common instance; such a simple question as this, "Do you ride to town to-day?" is capable of no fewer than four different acceptations, according as the emphasis is differently placed on the words. If it be pronounced thus: Do *you* ride to town to-day? the answer may naturally be, No: I sent my servant in my stead. If thus: Do you *ride* to town to-day? Answer, No: I intend to *walk*. Do you ride *to town* to-day? No: I ride out into *the fields*. Do you ride to town *to-day*? No: but I shall *to-morrow*.

In order to acquire the proper management of the emphasis, the great rule, and indeed the only rule possible to be given, is, that the speaker or reader study to attain a just conception of the force and spirit of those sentiments which he is to pronounce. For, to lay the emphasis with exact propriety, is a constant exercise of good sense and attention. It is far from being an inconsiderable attainment. It is one of the greatest trials of a true and just taste; and must arise from feeling delicately ourselves, and from judging accurately of what is fittest to strike the feelings of others.

Next to emphasis, the pauses in speaking demand attention. These are of two kinds: first, emphatical pauses; and next, such as mark the distinctions of sense. An emphatical pause is made after something has been said of peculiar moment, on which we want to fix the hearer's attention. Such pauses have the same effect as a strong emphasis, and are subject to the same rules; especially to the caution of not repeating them too frequently.

But the most frequent and the principal use of pauses is, to mark the divisions of the sense, and at the same time

to allow the speaker to draw his breath: and the proper adjustment of such pauses is one of the most difficult articles in delivery. In all reading and public speaking the management of the breath requires great care, so as not to be obliged to divide words from one another which have so intimate a connection that they ought to be pronounced in the same breath, and without the least separation.

Many sentences are miserably mangled, and the force of the emphasis totally lost, by divisions being made in the wrong place. To avoid this, every one, while he is reading or speaking, should be careful to provide a full supply of breath for what he is to utter. It is a great mistake to imagine that the breath must be drawn only at the end of a period, when the voice is allowed to fall. It may easily be gathered at the intervals of the period, when the voice is only suspended for a moment; and, by this management, we may have always a sufficient stock for carrying on the longest sentence without improper interruptions.

BLAIR.

APRIL THE TWENTY-FIRST.

On the Duties of School-boys.

QUINCTILIAN includes almost all the duty of scholars in this one piece of advice which he gives them: To love those who teach them, as they love the sciences which they learn of their instructors; and to look upon their teachers as fathers, from whom they derive not the life of the body, but that instruction which is in a manner the life of the soul. If they possess this sentiment of affection and respect, it suffices to make them apt to learn during the time of their studies, and full of gratitude all the rest of their lives.

Docility, which consists in submitting to the directions given them, in readily receiving the instructions of their masters, and in reducing these to practice, is properly the virtue of scholars, as that of masters is to teach well. The one can do nothing without the other: and as it is not sufficient for a labourer to sow the seed, unless the earth, after having opened her bosom to receive it, encourage its growth by warmth and moisture; so the whole fruit of instruction depends upon a good correspondence between the master and the scholar.

Gratitude for those who have laboured in our education is the characteristic of an honest man, and the tribute of a good heart. Who is there among us, says Cicero, that has been instructed with any care, that is not highly delighted with the sight, or even the bare remembrance, of his preceptors, masters, and the place where he was taught and brought up? Seneca exhorts young men to preserve always a great respect for their masters; to whose care they are indebted for the amendment of their faults, and for having imbibed sentiments of honour and probity.

The exactness and severity of our teachers may displease sometimes, at an age when we are not in a condition to judge of the obligations we owe them; but when years have ripened our understanding and judgment, we discern that their admonitions, reprimands, and a severe exactness in restraining the passions of an imprudent and inconsiderate age, are the very things which should make us esteem and love them. Thus Marcus Aurelius, one of the wisest and most illustrious emperors that Rome ever had, thanked heaven for two things especially; for his having had excellent tutors himself, and that he had found the like for his children.

The duties of school-boys consist in docility and obedience: respect for their masters, zeal for study, and a thirst after the sciences, joined to an abhorrence of vice and irregularity, together with a sincere and fervent desire of pleasing God, and referring all their actions to Him.

ROLLIN

APRIL THE TWENTY-SECOND.

Sects of the Jews at the Time of Christ.

(A Sunday Lesson.)

THE principal sects into which the Jews were divided at the time of Christ's mission, were those of the *Pharisees* and the *Sadducees*.

The former had subsisted a hundred and fifty years before the birth of Christ; they ascribed too much to tradition, and deluged the plain simplicity of the Mosaic law in a multitude of glosses and comments. They affected great austerity of morals, and practised numberless superstitions. They held the chief offices in church

and state, and had the greatest influence over the common people.

The *Sadducees* were a more ancient sect: they were distinguished by their adherence to the word of the Sacred Writings, interpreting it always in its most literal sense, and rejecting, with contempt, all traditionary reasonings and observances. But at the same time that they professed a strict, and even a bigoted adherence to the law of Moses, they held, by a strange contradiction, the loosest opinions. They denied a future state, and, as far as is consistent with any belief in the Holy Writings, were Epicureans both in practice and theory. In opposition to the Pharisees, who inclined to fatalism, they maintained the freedom of the human will. They avoided interfering in public concerns, and were few in number, but of the highest quality.

The *Scribes* had originally their name from transcribing, or making copies of the Law; and by degrees they became the expounders of it. They may be considered as the public teachers of the Jewish theology. Like all others who held offices, or interfered in public concerns, they were under the guidance, and obliged to profess the principles, and imitate the manners, of the Pharisees.

The *Herodians* were rather a political than a religious sect. Herod, whether an Idumæan by birth, or descended, as many suppose, from one of the Jewish families who returned from the Babylonish captivity, unquestionably belonged to a family which had long professed the Jewish religion, and was ranked among the tribe of Judah. But he seems to have had neither external reverence, nor internal respect, for the religious institutions of his country. He built temples in the Grecian taste; erected statues for idolatrous worship; adopted, in his ordinary habits of life, Roman manners and Roman usages; and, in his public capacity, was absolutely devoted and subservient to Roman politics. This brought upon him the hatred of the Pharisees, who were zealously attached to the independence of their country, and bore the Roman yoke with the utmost indignation. But many of the Jews, particularly of the Sadducees, embraced his politics, and, on that account, received from their countrymen the name of Herodians; an appellation, in the general notion of the Jews, of the highest contumely.

Such was the state of the religious sects among the Jews at the time of the birth of our Saviour. The rabbins, or

the teachers of each sect, defended their tenets with the greatest zeal and pertinacity. ROBINSON'S *Dictionary*.

APRIL THE TWENTY-THIRD

Progress of Sensation in the first Man.

I WELL remember that joyful anxious moment, when I first became acquainted with my own existence. I was quite ignorant of what I was, how I was produced, or whence I came. I opened my eyes: what an addition to my surprise! The light of the day, the azure vault of Heaven, the verdure of the earth, the crystal of the waters, all employed me at once, and animated and filled me with inexpressible delight. I at first imagined, that all those objects were within me, and made a part of myself.

I turned my eyes upon a thousand various objects: I soon found, that I could lose them, and restore them at will; and amused myself more at leisure with a repetition of this new-made power.

I now began to gaze without emotion, and to hearken with tranquillity, when a light breeze, the freshness of which charmed me, wafted its perfumes to my sense of smelling, and gave me such satisfaction as even increased my self-love.

Agitated, roused by the various pleasures of my new existence, I instantly arose, and perceived myself moved along, as if by some unknown and secret power.

I had scarcely proceeded forward, when the novelty of situation once more rendered me immovable. My surprise returned; I supposed that every object around me had been in motion: I gave to them that agitation, which I produced by changing place; and the whole creation seemed once more in disorder.

I lifted my hand to my head; I touched my forehead I felt my whole frame: I then supposed that my hand was the principal organ of my existence; all its informations were distinct and perfect, and so superior to the senses I had yet experienced, that I employed myself for some time in repeating its enjoyments: every part of my person I touched, seemed to touch my hand in turn; and gave back sensation for sensation.

I soon found, that this faculty was expanded over the whole surface of my body; and I now first began to per-

ceive the limits of my existence, which I had in the beginning supposed spread over all the objects I saw.

Upon casting my eyes upon my body, and surveying my own form, I thought it greater than all the objects that surrounded me. I gazed upon my person with pleasure; I examined the formation of my hand, and all its motions; it seemed to me large or little in proportion as I approached it to my eyes; I brought it very near, and it then hid almost every other object from my sight. I began soon, however, to find that my sight gave me uncertain information, and resolved to depend upon my feeling for redress.

This precaution was of the utmost service; I renewed my motions, and walked forward with my face turned towards the heavens. I happened to strike lightly against a palm-tree, and this renewed my surprise: I laid my hand on this strange body; it seemed replete with new wonders, for it did not return me sensation for sensation, as my former feelings had done. I perceived that there was something external, and which did not make a part of my own existence.

BUFFON.

APRIL THE TWENTY-FOURTH.

Different Methods of improving in Knowledge.

THERE are five eminent means, or methods, whereby the mind is improved in knowledge; and these are, Observation, Reading, Instruction by Lectures, Conversation, and Meditation; the last of which is in a more peculiar manner called Study.

Observation is the notice that we take of all occurrences in human life, whether they be sensible or intellectual: whether relating to persons or things, to ourselves or to others. It is this that furnishes us, even from our infancy, with a rich variety of ideas, propositions, words, and phrases. It is by this we know that fire will burn, that the sun gives light, that a horse eats grass, that an acorn produces an oak, that man is a being capable of reasoning and discourse, that our bodies die and are carried to the grave, and that one generation succeeds another. All those things which we see, which we hear or feel, which we perceive by sense or consciousness, or which we know in a direct manner with scarcely any

exercise of our reflecting faculties, or our reasoning powers, may be included under the general name of observation.

Reading is that method whereby we acquaint ourselves with what other men have published to the world in their compositions. The arts of reading and writing are of infinite advantage; for by them we are made partakers of the sentiments, observations, reasonings, and improvements, of all the learned world, in the most remote nations, and in former ages, almost from the beginning of mankind.

Public or private *lectures* are such verbal instructions as are given by a teacher while the learners attend in silence. We learn in this manner religion from the pulpit; philosophy or theology from the professor's chair; and mathematics, by a teacher showing us various theorems or problems; that is, speculations or practices, by demonstration and operation, with all the instruments of art necessary to those operations.

Conversation is another method of improving our minds, wherein, by mutual discourse and enquiry, we learn the sentiments of others, as well as communicate our sentiments to others in the same manner. Sometimes, indeed, the advantage is only on one side; as when a teacher and a learner meet and discourse together; but frequently the profit is mutual. Under the head of conversation we rank disputations of various kinds.

Meditation, or study, includes those exercises of the mind whereby we render all the former methods useful for our increase in true knowledge and wisdom. It is by meditation we confirm our remembrance of things, of our own experience, and of the observations we make. It is by meditation that we draw various inferences, and establish in our minds general principles of knowledge. It is by meditation that we fix in our memory whatever we learn, and form our own judgment of the truth or falsehood, the strength or weakness, of what others speak or write. It is meditation, or study, that draws out long chains of argument, and searches and finds deep and difficult truths, which before lay concealed in darkness.

Each of these five methods has its peculiar advantages, by which it materially assists the others; and its peculiar defects, which need to be supplied by the assistance of the rest.

WATTS

APRIL THE TWENTY-FIFTH.

Religion the Foundation of Content. — An Allegory.

OMAR, the hermit of the mountain Aubukabis, which rises on the east of Mecca, and overlooks the city, found one evening a man sitting pensive and alone, within a few paces of his cell; whose looks were wild and haggard, and his body feeble and emaciated. Son of affliction, said Omar, who art thou, and what is thy distress! My name, replied the stranger, is Hassan, and I am a native of this city; the angel of adversity has laid his hand upon me, and the wretch whom thine eye compassionates thou canst not deliver. — To deliver thee, said Omar, belongs to Him only, from whom we should receive with humility both good and evil; yet hide not thy life from me; for the burden which I cannot remove. I may at least enable thee to sustain. — Hassan fixed his eyes upon the ground, and remained some time silent; then, fetching a deep sigh, he looked up at the hermit, and thus complied with his request:

It is now six years since our mighty lord the caliph Almalic (whose memory be blessed!) first came privately to worship in the temple of the holy city. The blessing which he petitioned of the prophet, as the prophet's vicergerent he was diligent to dispense; in the intervals of his devotion, therefore, he went about the city relieving distress and restraining oppression. I, who dreaded no evil but sickness, and expected no good beyond the reward of my labour, was singing at my work, when Almalic entered my dwelling. He looked round with a smile of complacency; perceiving that though it was mean it was neat, and though I was poor I appeared to be contented. As his habit was that of a pilgrim, I hastened to receive him with such hospitality as was in my power; and my cheerfulness was rather increased than restrained by his presence.

After he had accepted some coffee, he asked me many questions; and though by my answers I always endeavoured to excite him to mirth, yet I perceived that he grew thoughtful, and eyed me with a placid but fixed attention. I suspected that he had some knowledge of me, and therefore enquired his country and his name. Hassan, said he, I have raised thy curiosity, and it shall be satisfied: he who now talks with thee is Almalic, the sovereign of the faithful, whose seat is the throne of Medina and whose commission is from above. These

words struck me dumb with astonishment. I started up, and was about to prostrate myself before him, but he prevented me. Hassan, said he, forbear: thou art greater than I, and from thee I have at once derived humility and wisdom. I answered, Mock not thy servant, who is but as a worm before thee: life and death are in thy hand, and happiness and misery are the daughters of thy will. Hassan, he replied, I can no otherwise give life or happiness, than by not taking them away: thou art thyself beyond the reach of my bounty, and possessed of felicity which I can neither communicate nor obtain. Thou art content, and hast therefore neither avarice nor ambition: to exalt thee, would destroy the simplicity of thy life, and diminish that happiness which I have no power either to increase or to continue.

He then rose, and commanding me not to disclose his secret, departed.

APRIL THE TWENTY-SIXTH.

Religion the Foundation of Content. (Continued.)

As soon as I recovered from the confusion and astonishment in which the caliph left me, I began to regret that my behaviour had intercepted his bounty; and accused as folly that cheerfulness which was the concomitant of poverty and labour. I now repined at the obscurity of my station: I neglected my labour, I spent the day in idleness; and at night, instead of losing myself in that sweet and refreshing sleep from which I used to rise with new health, cheerfulness, and vigour, I dreamed of splendid habits and a numerous retinue, of gardens, palaces, eunuchs, and women, and waked only to regret the illusions that had vanished. My health was at length impaired by the iniquity of my mind; I sold all my moveables for subsistence; and reserved only a mattress, upon which I sometimes lay from one night to another.

In the first moon of the following year, the caliph came again to Mecca, with the same secrecy, and for the same purposes. He found me, not singing at my work, ruddy with health, vivid with cheerfulness; but pale and dejected, sitting on the ground and chewing opium. He entered with a kind of joyful impatience in his countenance; which, the moment he beheld me, was changed to a mixture of wonder and pity. I was confounded at his presence; and throwing myself at his feet, I laid my

hand upon my head and was speechless. Hassan, said he, what canst thou have lost, whose health was the labour of thine own hand ; and what can have made thee sad, the spring of whose joy was in thy own bosom ? What evil hath befallen thee ? Speak, and if I can remove it, thou art happy.

I was now encouraged to look up, and I replied, Let my lord forgive the presumption of his servant, who rather than utter a falsehood would be dumb for ever. I am become wretched by the loss of that which I never possessed : thou hast raised wishes which indeed I am not worthy thou shouldst satisfy ; but why should it be thought, that he who was happy in obscurity and indigence, would not have been rendered more happy by eminence and wealth ?

When I had finished this speech, Almalic stood some moments in suspense, and I continued prostrate before him. Hassan, said he, I perceive that I mistook thy character ; I now discover avarice and ambition in thy heart, which lay torpid only because their objects were too remote to rouse them. I cannot, therefore, invest thee with authority, because I would not subject my people to oppression ; and because I would not be compelled to punish thee for crimes which I first enabled thee to commit. But as I have taken from thee that which I cannot restore, I will at least gratify the wishes that I excited, lest thy heart accuse me of injustice, and thou continue still a stranger to thyself. Arise, therefore, and follow me. — I sprung from the ground, as it were with the wings of an eagle ; I kissed the hem of his garment in an ecstasy of gratitude and joy ; and when I went out of my house, my heart leaped as if I had escaped from the den of a lion.

APRIL THE TWENTY-SEVENTH.

Religion the Foundation of Content. (Concluded.)

I FOLLOWED Almalic to the caravansera in which he lodged : and after he had fulfilled his vows, he took me with him to Medina. He gave me an apartment in the seraglio ; I was attended by his own servants ; my provisions were sent from his own table ; I received every week a sum from his treasury, which exceeded the most romantic of my expectations. But I soon discovered that no dainty was so tasteful as the food to which labour pro-

17. *Religion the Foundation of Content.*

cured an appetite ; no slumbers so sweet as those which weariness invited ; and no time so well enjoyed as that in which diligence is expecting its reward. I remembered these enjoyments with regret ; and while I was sighing in the midst of superfluities, which, though they encumbered me, yet I could not give up, they were suddenly taken away. Almalic, in the midst of the glory of his kingdom, and in the full vigour of his life, expired suddenly in the bath.

His son Aububekir, who succeeded to the throne, was incensed against me by some who regarded me at once with contempt and envy ; he suddenly withdrew my pension, and commanded that I should be expelled the palace ; a command which my enemies executed with so much rigour, that within twelve hours I found myself in the streets of Medina, indigent and friendless, exposed to hunger and derision, with all the habits of luxury, and all the sensibility of pride. I have travelled from Medina to Mecca ; but I cannot flee from myself. How different are the conditions in which I have been placed ! The remembrance of both is bitter ; for the pleasures of neither can return. — Hassan, having thus ended his story, smote his hands together ; and, looking upward, burst into tears.

Omar, having waited till his agony was past, went to him, and taking him by the hand, My son, said he, more is yet in thy power than Almalic could give, or Aububekir take away.

Thou wast once content with poverty and labour, only because they were become habitual, and ease and affluence were placed beyond thy hope ; for, when ease and affluence approached thee, thou wast content with poverty and labour no more. That which then became the object, was also the bound of thy hope ; and he whose utmost hope is disappointed, must inevitably be wretched. If thy supreme desire had been the delights of Paradise, and thou hadst believed that by the tenor of thy life these delights had been secured, as more could not have been given thee, thou wouldst not have regretted that less was not offered.

Depart, therefore, and be thankful for all things ; put thy trust in Him who alone can gratify the wish of reason, and satisfy thy soul with good ; fix thy hope upon that portion, in comparison of which the world is as the drop of the bucket, and the dust of the balance. Return, my son, to thy labour ; thy food shall again be tasteful, and thy rest shall be sweet ; to thy content also will be

added stability, when it depends not upon that which is ready to be possessed upon earth, but upon that which is exposed to Heaven.

Peace now dawned upon the mind of Hassan like the morning radiance of the morning: he returned to his labour with cheerfulness; his devotion became fervent and habitual; and the latter days of Hassan were happier than the first.

ADVENTURER.

APRIL THE TWENTY-EIGHTH.

Of the Natural Curiosities of England.

AMONG the natural curiosities of this country, those of Derbyshire appear to deserve the first place.

Elden Hole, four miles from Mam Tor, which is said to be continually mouldering away but never to become less, is a chasm in the side of a mountain, nearly seven yards wide and fourteen long, diminishing in extent within the rock; but of what depth is not known. A plummet once drew 884 yards of line after it, of which the first eighty were wet, without finding a bottom.

The entrance of Poole's Hole, near Buxton, for several paces, is very low, but soon opens into a very lofty vault, like the inside of a Gothic cathedral. The height is certainly very great, yet much short of what some have asserted, who reckon it a quarter of a mile perpendicular; though in length it exceeds that dimension: a current of water, which runs along the middle, adds, by its sounding stream re-echoed on all sides, very much to the astonishment of all who visit this vast cavern.

The entrance into the stupendous cavern at Castleton is wide at first, and upwards of thirty feet perpendicular. Several cottagers dwell under it, who in a great measure subsist by guiding strangers into the cavern, which is crossed by four streams of water, and then is thought impassable.

Other extraordinary caverns are found in the mountains of the north of England: as Yordas Cave, in the vale of Kingsdale, in Yorkshire, which contains a subterraneous cascade. Whetterscot Cave, not far from Ingleton, is divided by an arch of limestone, passing under which is seen a large cascade falling from a height of more than twenty yards. The length of this cave is about sixty yards, and the breadth thirty.

There are also in various parts of England many remark-

17. *Relig.
2nd.*
curd an +
wearing acted
which which
the is
the in
175

On Filial Tenderness.

which some are impregnated either with oitwich, in Worcestershire; or sulphur, of Wigan, in Lancashire; or bituminous Pitchford, in Shropshire. Others have y; as that near Lutterworth, in Leices-pping well in the West Riding of York-y, some ebb and flow, as those of the Peak, in Derbyshire; and Laywell, near Torbay, whose waters rise and fall several times in an hour. To these we may add that remarkable fountain near Richard's Castle, in Herefordshire, commonly called Bone Well, which is generally full of small bones, like those of frogs or fish, though often cleared out. At Anciliff, near Wigan, in Lancashire, is the famous Burning Well: the water is cold, neither has it any smell; yet so strong a vapour of sulphur issues out with the stream, that upon applying a light to it, the top of the water is covered with a flame, like that of burning spirits, which lasts several hours, and emits such a heat that meat may be boiled over it.

APRIL THE TWENTY-NINTH.

On Filial Tenderness. (A Sunday Lesson.)

THE occasion which demands from you the greatest tokens of respect and tenderness in your behaviour to your parents, is when they labour under infirmities of body or mind, and in the time of their extreme old age. You will then double all your tender assiduity: you will watch their wishes, prevent their desires, catch every precious opportunity to be grateful with an eager sweet attention; of which you will give them a thousand little inestimable proofs, which words cannot teach, and not to know is criminal; which require no capacity but that of feeling, and are to be understood in the heart.

I do not condescend to mention that they may be in want: they must not be so, while you have any thing, though it were only strength to maintain them by your labour.

But however affluent their fortunes, or liberal your supplies, they will always want, in that state of old age and infirmity, an indulgence and care which wealth cannot procure; and which, if it could, lose all their value when they are purchased. They will look for tokens of your kindness, which cannot be received from other hands. Their child is still the comfort and delight of their dying

eyes; and no other object is pleasing. You will be ready to answer such demands: your heart will correspond to these calls of nature. You will be proud of the humblest offices, and pleased with the most irksome. They cannot give your patience more exercise than you have given theirs. They will not live to let you clear your obligations. Pay what you can, you will still be debtors. Your felicity must be singular, or their distress, if you recompense them the things that they have done for you.

It is written, indeed, in history, that one woman, when her aged father was confined in prison, and like to die by famine there, obtained leave of his keepers to visit him once a day, and sustained him with her breast. Filial duty, in this instance, took the place of parental love, and taught her in his extremity to become a mother to him.

One writer seems to intimate, that this same old man, who had so much comfort in his daughter, had been a voluntary prisoner himself in his younger years for his father. How remarkably would be fulfilled the words of the wise Jewish writer, He that honoureth his father shall have joy of his own children!

OGDEN.

APRIL THE THIRTIETH.

Of the Nature of the Tides.

THE tides of the sea have ever been considered among the most wonderful phenomena of Nature. The conjectures of ancient philosophers concerning them were equally various, visionary, and wild. But the moderns have discovered that the phenomena of the tides are to be accounted for upon the principle of action and re-action, created by the common rotation of fixed earth and oscillating fluids, the former re-acting on the latter, and producing the oscillations of the waters called tides.

The waters of the great oceans are observed to oscillate in mass backward and forward, twice in every twenty-four hours. Their rate of motion in performing this oscillation is, in different seas, from two to five miles per hour; and the accumulation and retreat of the waters on the shores of seas and rivers occasion a rise and fall of from five to forty feet according to local circumstances, which rises and falls are called *Tides*. It is found also that the times of high and low water vary every day about fifty minutes, or the difference of time in which the Moon arrives on successive days at the meridian of the place.

There appears therefore to be some connection between

the motions of the waters of the sea, and the motion of the Moon. This connection has been ascribed to a supposed power called attraction or gravitation, acting in some unknown manner between remote bodies; but it is now found to be a necessary effect of the reciprocal motions of the Earth and Moon, created by the reactions of each on the intervening medium of space.

The Moon appears to perform a monthly revolution about the Earth; but in truth the Moon does not revolve around the centre of the earth, but round a point, fulcrum, or centre of the two masses of the Earth and Moon; and around this centre the Earth revolves in the same time, or 27 days, while it also revolves every day around its own axis.

The Earth's motion, then, around the centre of the two masses, while it turns on its own axis, necessarily gives a coincident swing, or centrifugal force, to the moveable waters; and as this force has constant reference to the position of the Moon on the opposite side of their common centre of motion, it will vary its position on the Earth accordingly, or about 50 minutes per day, because the Moon performs its entire revolution in 27 days, and therefore advances the 27th part of 24 hours.

The action or impulse of the Sun on the Earth and Moon being equal at the quarters, the Earth's diurnal motion and its lunar motion then coincide, and the swing from the latter being the least, the tides then become the lowest or *neap*; but as the two bodies approach the conjunction, or new, or full Moon, the greatest difference in the forces takes place, and then the oscillation of the seas is the greatest, and the rise is called a *spring* tide.

The rise and fall is however not the same on all coasts, because the same bulk of waters will rise higher in contracted channels than in open ones, and because among rocks and islands the effect is often increased by the meeting of the currents of tides in opposite directions.

In effect the tides serve to regulate and give steadiness to the motions of the Earth, like the balance-wheel of any machine, and are a further proof of the sublime contrivance which arranged the world. EDITOR.

MAY THE FIRST.

Natural Phenomena of the Month of May.

MAY has ever been the favourite month of the year in poetical description; but the praises so lavishly bestowed

upon it, took their rise from climates more southern than ours. In such it really unites all the soft beauties of spring with the radiance of summer; and has warmth enough to cheer and invigorate, without overpowering. With us, great part of the month is yet too chill for a perfect enjoyment of the charms of nature; and frequent injury is done to the flowers and young fruits during its course, by blights and nipping winds.

The month of May is, on the whole, however, even in this country, sufficiently profuse of beauties. The earth is covered with the freshest green of the grass and young corn, and adorned with numerous flowers opening on every side. The trees put on their leafy verdure; the hedges are rich in fragrance from the snowy bloom of the hawthorn; and the orchards display their highest beauty in the delicate blush of the apple-blossoms.

All this scene of beauty and fertility is sometimes dreadfully ravaged by the blights, which peculiarly occur in this month. The mischief is done chiefly by innumerable swarms of very small insects, which are brought by the north-east winds.

The leafing of trees is commonly completed in this month. It begins with the aquatic kinds, such as the willow, poplar, and alder, and ends with the oak, beech, and ash. These are sometimes very thin of foliage, even at the close of May.

Birds hatch and rear their young principally during this month. The patience and assiduity of the female during the task of sitting upon her eggs, cannot be too much admired; nor should the conjugal affection of the male be forgotten, who sings to his mate, and often relieves her fatigues by supplying her place: and nothing can exceed the paternal tenderness of both, when the young are brought to light.

Towards the end of May the bee-hives send forth their earlier swarms: these colonies consist of the young progeny, now grown too numerous to remain in their parent habitation, and sufficiently strong and vigorous to provide for themselves. One queen-bee is necessary to form each colony; and wherever she flies the rest follow. Nature directs them to march in a body in quest of a new settlement, which if left to their choice would generally be some hollow trunk of a tree: but man, who converts the labours and instincts of so many animals to his own use, provides them with a more secure dwelling, and repays himself with their honey.

AIKIN.

MAY THE SECOND.

Rules for improving the Mind.

LET the enlargement of your knowledge be one constant view and design in life: since there is no time or place, no transaction, occurrence, or engagement, which excludes us from this method of improving the mind.

When we are in the house or in the city, wherever we turn our eyes, we see the works of men; when we are in the country we behold more of the works of God. The skies, the ground above and beneath us, and the animal and vegetable world round about us, may entertain our observation with ten thousand varieties.

From observation of the day and the night, the hours and the flying minutes, learn a wise improvement of time, and be watchful to seize every opportunity to increase in knowledge.

From the vices and follies of others, observe what is hateful in them; consider how such a practice looks in another person, and remember that it looks as ill or worse in yourself. From their virtues learn something worthy of your imitation.

From your natural powers, sensation, judgment, memory, hands, feet, &c. make this inference; that they were not given you for nothing, but for some useful employment for the good of your fellow-creatures, your own best interest, and final happiness.

Thus, from every appearance in nature, and from every occurrence of life, you may derive natural, moral, and religious observations to entertain your minds, as well as rules of conduct in the affairs relating to this life, and that which is to come.

Let the circumstances or situations of life be what they will, a man should never neglect the improvement that is to be derived from observation. If he travel into the East or West Indies, and fulfil the duties of the military or mercantile life there; if he rove through the earth or the seas for his own humour as a traveller, or pursue his diversions in what part of the world he pleases as a gentleman; if prosperous or adverse fortune call him to the most distant parts of the globe; still let him carry on his knowledge, and the improvement of his faculties, by wise observations. By these means he may render himself some way useful to mankind.

But in making your observations on persons, take care

in indulging that busy curiosity, which is ever inquiring into private and domestic affairs with an endless itch of learning the secret histories of families. Such curiosity begets suspicions and jealousies, and furnishes matter for the evil passions of the mind, and the impertinencies of discourse.

Be not also too hasty to erect general theories from a few particular observations, appearances, or experiments. This is what the logicians call a false induction. A hasty determination of some universal principles, without a due survey of all the particular cases which may be included in them, is the way to lay a trap for our own understandings in their investigation of any subject, and we shall often be taken captives by mistake and falsehood.

WATTS.

MAY THE THIRD.

On the Surface and Strata of the Earth.

IN some places risings and declivities only are found: in others the elevations are vast and lofty, accompanied with proportionate valleys. In some parts the dry land, interrupted only by slight intersections for the currents of rivers, stretches into immense continental tracts; whilst in others, prodigious excavations of the substance of the earth, serve as the receptacles of immense oceans. These, it is allowed, exceed in the sum of their extent, that of the dry land, and bear a very near proportion in their depth to the height of the loftiest mountains.

Mountains are with propriety divided into primitive, or primeval; and secondary, or epizotic. The primitive and secondary mountains differ, not only in their composition, but also in their form.

The primitive mountains are composed of granates and stones of the granatic class, of porphyry, jasper, serpentine, sand-stone, trap, and sometimes, but more rarely, of lime-stone, fluoro, gypsum, &c. which frequently lie in strata, but more commonly are found in huge blocks. These mountains never cover secondary mountains, but are often covered by them. They are commonly the highest ridges in any chain, and terminate, generally, in points more narrow and sharp than the secondary. No organic remains are to be found in the interior part of the substance of the stones of which they are composed.

Secondary mountains are generally marked by a softer outline, and frequently possess the distinctive character of being composed of, or at least of containing within them, the fossil remains of organised substances. They always rest on, and sometimes cover, primary mountains; and very commonly also they lean on their sides, or invest them. The secondary mountains are formed, like the primitive, either of one species of stone, or of strata of different species.

The substances of which the secondary mountains are chiefly composed, are lime-stone, swine-stone, marlite, chalk, and gypsum. They are also, sometimes, formed of indurated clay and lithomarza, jasper, porphyry, trap, silicious sand-stone, and other substances, which belong also to the primitive mountains.

These strata do not always follow each other in regular order, since sand and gravel are sometimes found at a considerable depth, and trap, or rag-stone, is often interposed between them in various directions. PARKINSON.

MAY THE FOURTH.

The celebrated Cataract of Niagara, in Canada.

THIS amazing fall of water is made by the river St. Lawrence, in its passage from lake Eri into lake Ontario. The St. Lawrence is one of the largest rivers in the world, and yet the whole of its waters are discharged in this place by a fall of a hundred and fifty feet perpendicular.

It is not easy to bring the imagination to correspond to the greatness of the scene. A river extremely deep and rapid, and which serves to drain the waters of almost all North America into the Atlantic ocean, is here poured precipitately down a ledge of rocks, that rises like a wall across the whole bed of its stream. The river a little above is near three quarters of a mile broad; and the rocks, where it grows narrower, are four hundred yards over. Their direction is not straight across, but curving like a horse-shoe: so that the cataract which bends to the shape of the obstacle, rounding inwards, presents a kind of theatre the most tremendous in Nature.

Just in the middle of this circular wall of waters a little rock, that has braved the fury of the current, presents two points, and divides the stream at the top into

two parts ; but they unite again long before they reach the bottom.

The noise of this astonishing cataract is heard at the distance of twenty miles ; and the fury of the waters at the termination of their fall is inconceivable. The dashing produces a mist that rises to the very clouds, and forms a beautiful rainbow when the sun shines. If any person goes into this vapour, or if the wind blows it on him, in a few moments he will be as wet as if immersed in water.

In the months of September and October such prodigious quantities of dead water-fowl are found every morning below the fall, that they afford ample subsistence for the garrison at the fort of Niagara. Bodies of deer, bears, and other animals, are sometimes found that have perished in attempting to cross the water above the fall. Some melancholy instances also of human beings having lost their lives in a similar manner, are related by travellers.

J. GOLDSMITH

MAY THE FIFTH.

Wise and remarkable Sayings of eminent Men.

AGESILAUS, king of Sparta, being asked what things he thought most proper for boys to learn, answered, Those things which they ought to practise when they come to be men. A wiser than Agesilaus has inculcated the same sentiment: Train up a child, said Solomon, in the way he should go, and when he is old he will not depart from it.

An Italian philosopher expressed in his motto, that time was his estate ; an estate indeed which will produce nothing without cultivation, but which will always abundantly repay the labours of industry, and satisfy the most extensive desires, if no part of it be suffered to lie waste by negligence, to be overrun with noxious plants, or laid out for show rather than use.

When Aristotle was asked what a man could gain by telling a falsehood ? he replied, Never to be believed when he speaks the truth.

Sully, the great statesman and minister to Henry IV. king of France, always retained at his table, in his most prosperous days, the same frugality to which he had been accustomed in early life. He was frequently

reproached by the courtiers for this simplicity; but he used to reply to them in the words of an ancient philosopher: If the guests be men of sense, there is sufficient for them; if they be not, I can very well dispense with their company.

Titus, the Roman emperor, recollecting at supper that he had not done any act of public utility during the day, said to those who were with him, My friends, I have lost a day.

Antoninus Pius, the Roman emperor, was an amiable man and a good prince. When some of his courtiers attempted to influence him with a passion for military glory, he answered, that he more desired the preservation of one subject than the destruction of a thousand enemies.

Men are too often ingenious in making themselves miserable, by aggravating to their own fancy, beyond bounds, all the evils which they endure. They compare themselves with none but those whom they imagine to be more happy; and complain that upon them alone has fallen the whole load of human sorrows. I will restore thy daughter again to life, said an eastern sage to a prince, who grieved immoderately for the loss of a beloved child, provided thou art able to engrave on her tomb the names of three persons who have never mourned. The prince made inquiry after such persons; but found the inquiry vain, and was silent.

MAY THE SIXTH.

The Heart and Affections. (A Sunday Lesson.)

You will have read the New Testament to very little purpose, if you do not perceive the great end and intention of all its precepts to be the improvement and regulation of the heart and affections. There are no virtues more insisted on as necessary to our happiness, than humility, and sincerity or uprightness of heart; yet none more difficult and rare. Pride and vanity, the vices opposite to humility, are the sources of almost all the worldly faults both of men and women.

Pride is a high opinion of ourselves, and an affected contempt for others. I say affected; for that it is not a real contempt is evident from this, that the lowest object of it

is important enough to torture the proud man's heart, only by refusing him the homage and admiration he requires. Thus Haman could relish none of the advantages on which he valued himself, while that Mordecai, whom he pretended to despise, sat still at the king's gate, and would not bow to him as he passed. But, as the proud man's contempt of others is only assumed with a view to awe them into reverence by his pretended superiority, so it does not preclude an extreme inward anxiety about their opinions, and a slavish dependence on them for all his gratifications.

Vanity also too often leads to the most ruinous actions always corrupts the heart, and is perhaps as displeasing in the sight of the Almighty, as those faults which find least mercy from the world: yet, alas! it is a passion so prevailing, that it requires all the efforts of reason, and all the assistance of grace, totally to subdue it.

How necessary it is, therefore, frequently to enter into ourselves, and search out our spirit, will appear if we consider how much the human heart is prone to insincerity, and often from being first led by vanity into attempts to impose on ourselves.

He who "requires truth in the inward parts" will not excuse our self-deception; for he has commanded us to examine ourselves diligently, and has given us such rules as can never mislead us, if we desire the truth, and are willing to see our faults in order to correct them. But this is the point in which we are defective: we are desirous to gain our own approbation, as well as that of others, at a cheaper rate than that of being really what we ought to be; and we take pains to persuade ourselves that we are that which we indolently approve.

Watch then and observe every evil propensity of your heart, that you may in time correct it, with the assistance of that grace, which alone can conquer the evil of our nature, and which you must constantly and earnestly implore.

CHAPONE.

MAY THE SEVENTH.

The Horse and Camel.

ARABIA, in the opinion of the naturalist, is the genuine and original country of the *horse*; the climate most propitious, not indeed to the size, but to the spirit and swiftness of that generous animal. The merit of the Barb, the

Spanish and the English breed, is derived from a mixture of Arabian blood: the Bedoweens preserve, with superstitious care, the honours and the memory of the purest race: the males are sold at a high price, but the females are seldom alienated; and the birth of a noble foal was esteemed, among the tribes, as a subject of joy and mutual congratulation. These horses are educated in the tents, among the children of the Arabs, with a tender familiarity, which trains them in the habits of gentleness and attachment. They are accustomed only to walk and to gallop: their sensations are not blunted by the incessant abuse of the spur and the whip; their powers are reserved for the movements of flight and pursuit; but no sooner do they feel the touch of the hand or the stirrup, than they dart away with the swiftness of the wind; and, if their friend be dismounted in the rapid career, they instantly stop till he has recovered his seat.

In the sands of Africa and Arabia, the *camel* is a sacred and precious gift. That strong and patient beast of burden can perform, without eating or drinking, a journey of several days; and a reservoir of fresh water is preserved in a large bag, a fifth stomach of the animal, whose body is imprinted with the marks of servitude: the larger breed is capable of transporting a weight of a thousand pounds; and the dromedary, of a lighter and more active frame, outstrips the fleetest courser in the race. Alive or dead, almost every part of the camel is serviceable to man: her milk is plentiful and nutritious: the young and tender flesh has the taste of veal: the dung supplies the deficiency of fuel; and the long hair, which falls each year and is renewed, is coarsely manufactured into the garments, the furniture, and the tents, of the Bedoweens.

In the rainy seasons they consume the rare and insufficient herbage of the desert: during the heats of summer, and the scarcity of winter, they remove their encampments to the sea-coast, the hills of Yemen, or the neighbourhood of the Euphrates, and have often extorted the dangerous licence of visiting the banks of the Nile, and the villages of Syria and Palestine. The life of a wandering Arab is a life of danger and distress; and though sometimes, by rapine or exchange, he may appropriate the fruits of industry, a private citizen in Europe is in the possession of more solid and pleasing luxury, than the proudest emir, who marches in the field at the head of ten thousand horse.

GIBBON.

MAY THE EIGHTH.

Of Rivers.

ALL rivers have their source either in mountains or elevated lakes; and it is in their descent from these that they acquire that velocity which maintains their future current. At first the course of a river is generally rapid; but it is retarded in its journey, by the continual friction against the banks, by the many obstacles it meets with to divert its stream, and by the surface of the earth generally becoming more level as it approaches towards the sea.

The largest rivers of Europe are, first, the Wolga, which is about six hundred and fifty leagues in length, extending from Reschew to Astrachan. The next in order is the Danube: the course of this river is about four hundred and fifty leagues from the mountains of Switzerland to the Black Sea: the Don, or Tanaïs, which is four hundred leagues from the source of that branch of it called the Sofna, to its mouth in the Euxine Sea. The Nieper, which rises in Muscovy, and runs a course of three hundred and fifty leagues, to empty itself into the Black Sea. The Dwina, which takes its rise in a province of the same name in Russia, then runs a course of three hundred leagues, and disembogues into the White Sea, a little below Archangel.

The largest rivers of Asia are the Hoanho, in China, which is eight hundred and fifty leagues in length. The Jenisca of Tartary, about eight hundred leagues in length. The Oby, of five hundred leagues, running from the lake of Kila into the Northern Sea. The Amour, in Eastern Tartary, whose course is above five hundred and seventy-five leagues, from its source to its entrance into the sea of Kamtschatka. The Kiam in China, five hundred and fifty leagues in length. The Ganges, one of the most noted rivers in the world, is about as long as the former. Next to this may be reckoned the still more celebrated river Euphrates. Nor must the Indus be forgotten.

The largest rivers of Africa are, the Senegal, whose course is said to be three thousand miles in length; and the celebrated Nile, which from its source among the Mountains of the Moon, in Upper Ethiopia, to the Mediterranean, is thought to extend as far.

But of all parts of the world, America, as it exhibits the most lofty mountains, so it supplies the largest rivers. The principal of these is the great river Amazon, which performs a course of nearly four thousand miles. The

breadth and depth of this river are answerable to its vast length, and where its width is most contracted, its depth is augmented in proportion. So great is the body of its waters, that other considerable rivers, objects of admiration, are swallowed in its bosom. It proceeds after their junction with its usual appearance without any visible change in its breadth or rapidity; and at length discharges itself into the ocean, by a channel which is a hundred and fifty miles broad. The other great American rivers are the Mississippi, the St. Lawrence, and the La Plata.

To whatever quarter of the globe we turn, we shall find new reasons to be satisfied with that part in which we ourselves reside. The rivers of England furnish all the plenty of the African stream, without its inundations; they have all the coolness of the polar rivulets, with a more constant supply; they may want the terrible magnificence of huge cataracts, or extensive lakes, but they are more navigable, and more transparent; though less deep and rapid than the rivers of the torrid zone, they are more manageable, and only wait the will of man to take their direction.

J. GOLDSMITH.

MAY THE NINTH.

The Seasons.

Who is this beautiful virgin that approaches, clothed in a robe of light green? She has a garland of flowers on her head, and flowers spring up wherever she sets her foot. The snow which covered the fields, and the ice which was in the rivers melt away when she breathes upon them. The young lambs frisk about her, and the birds warble in their little throats to welcome her coming; and when they see her, they begin to choose their mates, and to build their nests. Youths and maidens, have you seen this beautiful virgin? If you have, tell me who is she, and what is her name.

Who is this that comes from the south, thinly clad in a light transparent garment? Her breath is hot and sultry; she seeks the refreshment of the cool shade; she seeks the clear streams, the crystal brooks, to bathe her languid limbs. The brooks and rivulets fly from her, and are dried up at her approach. She cools her parched lip with berries, and the grateful acid of fruits, the seedy melon, the sharp apple, and the red pulp of the juicy cherry, which are poured out plentifully around her. The tanned

hay-makers welcome her coming; and the sheep-shearer, who clips the fleeces of his flock with his sounding shears. When she comes, let me lie under the thick shade of a spreading beech-tree; let me walk with her in the early morning, when the dew is yet upon the grass;—let me wander with her in the soft twilight, when the shepherd shuts his fold, and the star of evening appears. Youths and maidens, tell me if you know, who is she, and what is her name.

Who is he that comes with sober pace, stealing upon us unawares? His garments are red with the blood of the grape, and his temples are bound with a sheaf of ripe wheat. His hair is thin and begins to fall, and the auburn is mixed with mournful grey. He shakes the brown nuts from the tree. He winds the horn, and calls the hunters to their sports. The gun sounds. The trembling partridge and the beautiful pheasant flutter, bleeding in the air, and fall dead at the sportsman's feet. Who is he that is crowned with the wheat-sheaf? Youths and maidens, tell me, if you know, who is he, and what is his name.

Who is he that comes from the north, clothed in furs and warm wool? He wraps his cloak close about him. His head is bald; his beard is made of sharp icicles. He loves the blazing fire, high piled upon the hearth. He binds skates to his feet, and skims over the frozen lakes. His breath is piercing and cold, and no little flower peeps above the surface of the ground, when he is by. Whatever he touches turns to ice. If he were to strike you with his cold hand, you would be quite stiff and dead, like a piece of marble. Youths and maidens, do you see him? He is coming fast upon us, and soon he will be here. Tell me, if you know, who is he, and what is his name.

BARBAULD.

MAY THE TENTH.

The Influence of an early Taste for Reading.

THERE is, perhaps, nothing that has a greater tendency to decide favourably or unfavourably respecting a man's future intellect than the question, Whether or not he be impressed with an early taste for reading.

Books are the depository of every thing that is most honourable to man. He that loves reading has every thing within his reach. He has but to desire, and he may

possess himself of every species of wisdom to judge, and power to reform.

The chief point of difference between the man of talent and the man without, consists in the different ways in which their minds are employed during the same interval: they are obliged, we will suppose, to walk from Temple-bar to Hyde-park Corner: the dull man goes straight forward, he has so many furlongs to traverse: he observes whether he meets any of his acquaintance: he inquires respecting their health and their family; he glances his eye, perhaps, at the shops as he passes; he admires, perchance, the fashion of a buckle, and the metal of a tureen. If he experience any flights of fancy, they are of a short extent; of the same nature as the flights of a forest bird clipped of his wings, and condemned to pass the rest of his life in a farm-yard.

On the other hand, the man of talent gives full scope to his imagination. Undebted to the suggestions of surrounding objects, his whole soul is employed. He enters into nice calculations; he digests sagacious reasonings. In imagination he declaims, or describes, impressed with the deepest sympathy or elevated to the loftiest rapture. He makes a thousand new and admirable combinations. He passes through a thousand imaginary scenes, tries his courage, tasks his ingenuity, and thus becomes gradually prepared to meet almost any of the many-coloured events of human life. If he observes the passengers, he reads their countenances, conjectures their past history, and forms a superficial notion of their wisdom or folly, their virtue or vice, their satisfaction or misery. If he observes the scenes that occur, it is with the eye of an artist. Every object is capable of suggesting to him a volume of reflections.

The time of these two persons in one respect resembles; it has brought them both to Hyde-park Corner. In every other respect how dissimilar!

Probably nothing has contributed so much to generate these opposite habits of mind, as an early taste for reading. Books gratify and excite our curiosity in innumerable ways. They force us to reflect; they present direct ideas of various kinds, and they suggest indirect ones. In a well-written book we are presented with the maturest reflections, or the happiest flights of a mind of uncommon excellence; and it is impossible that we can be much accustomed to such companions, without attaining some resemblance of them.

GODWIN.

MAY THE ELEVENTH

The Danger of keeping bad Company.

THE danger of keeping bad company arises principally from our aptness to imitate and catch the manners and sentiments of others. In our earliest youth the contagion of manners is observable. In the boy yet incapable of having any learning instilled into him, we easily discover, from his first actions, and rude attempts at language, the kind of persons with whom he has been brought up: we see the early spring of a civilized education, or the first wild shoots of rusticity.

As he enters further into life, his behaviour, manners, and conversation, all take their cast from the company he keeps. Observe the peasant, and the man of education; the difference is striking. And yet God has bestowed equal talents on each; the only difference is, they have been thrown into different scenes of life, and have had commerce with persons of different stations.

Nor are manners and behaviour more easily caught, than opinions and principles. In childhood and youth we naturally adopt the sentiments of those about us: and as we advance in life, how few of us think for ourselves! how many of us are satisfied with taking our opinions at second hand!

The great power of custom forms another argument against keeping bad company. However shocked we may be at the first approaches of vice, this shocking appearance goes off upon an intimacy with it. Custom will soon render the most disgusting object familiar to our view; and this is indeed a kind provision of Nature, to render labour, and toil, and danger, which are the lot of a man, more easy to him. The raw soldier, who trembles at the first encounter, becomes a hardy veteran in a few campaigns. Habit renders danger familiar, and of course indifferent to him.

But habit, which is intended for our good, may, like other kind appointments of Nature, be converted into a mischief. The well-disposed youth, entering first into bad company, is shocked at what he sees and what he hears. The good principles which he had imbibed, ring in his ears an alarming lesson against the wickedness of his companions. But, alas! this sensibility is of only a day's continuance. The next jovial meeting makes the horrid

picture of yesterday more easily endured. Virtue is soon thought a severe rule; an inconvenient restraint; a few pangs of conscience now and then whisper to him that he once had better thoughts: but even these by degrees die away, and he who at first was shocked even at the appearance of vice, is formed by custom into a profligate leader of vicious pleasures.

So carefully should we oppose the first approaches of sin! so vigilant should we be against so insidious an enemy!

GILPIN.

MAY THE TWELFTH.

On the Air and Atmosphere.

THE treasures of the earth, the verdure of the fields, and even the refreshments of the stream, are too often seen almost entirely appropriated to the luxuries of the great; while the less fortunate part of mankind stand humble spectators of their encroachments. But the *air* no limitation can bound, no land-marks restrain. In this benign element all mankind have to boast of an equal possession; and for this we have all equal obligations to Heaven. While we live we consume a part of this element for our sustenance; and when we die, our perishing bodies render back the supply, which during life we had accumulated from the general mass.

Air, in a general sense, is that invisible fluid surrounding our globe, on which depends not only animal but vegetable life; and which appears to be one of the great agents employed by Nature in carrying on her operations throughout the world.

The discoveries respecting the nature of air, have not been more interesting to philosophers, than useful to science and beneficial to society. Many perplexing processes in chemistry have been explained in consequence of them, several have been facilitated, and a number of new and useful ones have been introduced. The phenomena attending metallic calcinations and reductions have been greatly elucidated.

The knowledge of the use of air in respiration, the method of ascertaining its purity and fitness for that function, and the discovery of the medicinal properties of some kinds of air, all promise to be of considerable advantage. The method of ascertaining the purity of the air of a place and the mode of ventilating an apartment,

are of great utility. In short, there is, perhaps, no station of life where some knowledge of this subject may not be important and beneficial.

That most stupendous body of air, the atmosphere, which every where surrounds our globe, consists of a pellucid, elastic compound, which we denote by the name of common, or atmospheric air. It is found to consist chiefly of two fluids mixed together, widely differing in their nature. The largest part, exceeding the rest three times or more in bulk, is fit neither for supporting fire nor for respiration. The other is called oxygen, or vital air, which differs widely from the preceding, being indispensably necessary to animal fire and respiration.

The atmosphere may be looked upon not only as the general receptacle of the aqueous vapours of the sea and rivers, but likewise of all mineral exhalations; of the steams which are constantly arising from the perspiration of whatever enjoys animal or vegetable life, and from the outrefaction of these substances when dead; or the smaller seeds of terrestrial and aquatic plants; of the eggs of an infinity of species of imperceptible animalcules; of the acids and oils separated by combustion from all sorts of fuel; of the matter of light; of the electric fluid; and of a variety of other substances, which are elevated, and for a time kept suspended, by natural and accidental causes.

MAY THE THIRTEENTH.

Virtuous and religious Habits. (A Sunday Lesson.)

IN the midst of youth, health, and abundance, the world is apt to appear a very gay and pleasing scene; it engages our desires, and in some degree satisfies them also. But it is wisdom to consider, that a time will come, when youth, health, and fortune, will all fail us; and if disappointment and vexation do not sour our taste for pleasure, at least sickness and infirmities will destroy it. In these gloomy seasons, and above all, at the approach of death, what will become of us without religion? When this world fails, whither shall we flee if we expect no refuge in another? Without a holy hope in God, resignation to his will, and trust in him for deliverance, what is there that can secure us against the evils of life?

Youth is the season to form religious habits; the earliest principles are generally the most lasting; and those

of a religious cast are seldom wholly lost. Though the temptations of the world may now and then draw the well-principled youth aside; yet, his principles being continually at war with his practice, there is hope, that in the end the better part may overcome the worse, and bring on a reformation: whereas he who has suffered habits of vice to get possession of his youth, has little chance of being brought back to a sense of religion. Some calamity must rouse him. He must be awakened by a storm, or sleep for ever. How much better it is, then, to make that easy to us which we know is best! and to form those habits now, which hereafter we shall wish we had formed!

Youth is introductory to manhood, to which it is, properly speaking, a state of preparation. During this season we must qualify ourselves for the parts we are to act hereafter. In manhood we bear the fruit which has in youth been planted. If we have sauntered away our youth, we must expect to be ignorant men. If indolence and inattention have taken an early possession of us, they will probably increase as we advance in life, and make us a burden to ourselves, and useless to society. If, again, we suffer ourselves to be misled by vicious inclinations, they will daily get new strength, and end in dissolute lives.

But if we cultivate our minds in youth, and attain habits of attention and industry, of virtue and sobriety, we shall find ourselves well prepared to act our future parts in life; and, what above all things ought to be our care, by gaining this command over ourselves, we shall be more able, as we get forward in the world, to resist every new temptation as soon as it appears.

GILPIN.

MAY THE FOURTEENTH.

Nature and Properties of the Air.

BESIDES its weight, or density, which the air has in common with water and other fluids, it possesses elasticity; by which it allows itself to be compressed into a smaller bulk, and returns to its original volume when the pressure is removed. Thus, a blown bladder being squeezed in the hand, we find the included air sensibly resist; so that, upon our ceasing to compress it, the cavities or impressions made in its surface readily expand again and are

filled up. It is this property of elasticity, joined to fluidity, that constitutes an air or gas.

It is in the atmosphere that the clouds are assembled, which assume such a variety of hues and forms, and which, as they are condensed or rarefied, retain the vapours, or return them to the earth in rain, or hail, or snow.

The winds are another important part of the subject of air, and are in various ways not only salubrious, but highly beneficial to man. Their continual vicissitudes give a turn to the dispositions and productions of Nature; they correct those ill consequences which would unavoidably flow from a too tedious inactivity and state of rest; and invigorate and purify the air, by keeping it in perpetual motion. Without them our habitations would become unwholesome, and great towns would in a short time be as nauseous as a common sewer: in short, Nature would languish and die.

Vegetables both meliorate and injure air. In the day and in the light they meliorate the air, but in the absence of light they shed a destructive influence: vital air is found to be spread around vegetables in the sun; azotic air in the absence of the sun.

No poison is more subtle than the air which is left after respirable air is destroyed. Plants, when exposed to the influence of the sun, correct the vitiated air occasioned by the breathing of animals and other processes; but placed out of the influence of the sun, they infect the air so as to occasion the extinction of life.

Man has no reason to complain that common air is not vital air. If it were, his life would soon be at an end, and all the vegetable world would perish. On the other hand, if its portion of oxygen were much less, plants, indeed, would vegetate better, but all animated nature would soon be extinct. The bounty of Providence has wisely established a due medium, by which the existence of both is maintained. In all the surprising elaborations of these fluids, the leaves are the principal instruments: the varnished superior surface imbibes the essential particles, which after elaboration are by the inferior poured forth in pure but invisible streams.

While the heats of summer prevail, these streams are the most plentiful. Hence, at least in our temperate climates, the atmosphere is best in the height of summer, and in the height of winter; for in the first, the vegetable world is in its greatest vigour; and in the second, the general tendency to corruption has ceased.

MAY THE FIFTEENTH.

Affection and Sagacity of Animals.

A REMARKABLE mixture of sagacity and instinct occurred to me one day, as my people were pulling off the lining of a hot-bed, in order to add some fresh dung. From the side of this bed leaped, with great agility, an animal that made a most grotesque figure; nor was it without great difficulty that it could be taken: when it proved to be a large white-bellied field-mouse, with three or four young clinging to her teats by their mouths and feet. It was amazing, that the desultory and rapid motions of the dam should not have obliged her litter to quit their hold, especially when they were so young as to be both naked and blind.

To these instances of tender attachment, many more might be added by those who are observant of nature.

That there is also a wonderful spirit of sociability in the brute creation, the congregating of gregarious birds in the winter is a remarkable instance. Many horses, though quiet in company, will not stay one minute in a field by themselves; the strongest fences cannot restrain them. My neighbour's horse will not only not stay by himself abroad, but will not bear to be left alone in a strange stable without discovering the utmost impatience, and endeavouring to break the rack and manger with his fore feet. He has been known to leap out of a stable window after company; and yet, in other respects, is remarkably quiet. Oxen and cows will not fatten in solitude, but will neglect the finest pasture that is not recommended by society. It would be needless to instance in sheep, which constantly flock together.

But this propensity seems not to be confined to animals of the same species; for I know a doe, still alive, that was brought up from a little fawn, with a dairy of cows; with them it goes to the field, and with them it returns to the yard. The dogs of the house take no notice of this deer being used to her; but, if strange dogs come by, a chace ensues; while the master smiles to see his favourite securely leading her pursuers over hedge, or gate, or stile, till she returns to the cows, who, with fierce lowings and menacing horns, drive the assailants quite out of the pasture.

Even great disparity of kind and size does not always prevent social advances and mutual fellowship. For a very intelligent and observant person has assured me, that

in the former part of his life, keeping but one horse, he happened also to have but one solitary hen. These two incongruous animals spent much of their time together in a lonely orchard, where they saw no creature but each other. By degrees, an apparent regard began to take place between these two sequestered individuals. The fowl would approach the quadruped with notes of complacency, rubbing herself gently against his legs; while the horse would look down with satisfaction, and move with the greatest caution and circumspection, lest he should trample on his diminutive companion. Thus, by mutual good offices, each seemed to console the vacant hours of the other.

GILBERT WHITE.

MAY THE SIXTEENTH.

The Golden Mean.

WHEN the plains of India were burnt up by a long drought, Hamet and Raschid, two neighbouring shepherds, faint with thirst, stood at the common boundary of the grounds, with their flocks and herds panting round them, and in extremity of distress prayed for water. On a sudden the air was becalmed, the birds ceased to chirp, and the flocks to bleat. They turned their eyes every way, and saw a being of mighty stature advancing through the valley, whom they knew, on his nearer approach, to be the genius of distribution. In one hand he held the sheaves of plenty, and in the other the sabre of destruction.

The shepherds stood trembling, and would have retired before him; but he called to them with a voice gentle as the breeze that plays in the evening among the spices of Sabæa; Flee not from your benefactor, children of the dust! I am come to offer you gifts which only your own folly can make vain. You here pray for water, and water I will bestow; let me know with how much you will be satisfied: speak not rashly; consider, that of whatever can be enjoyed by the body, excess is no less dangerous than scarcity. When you remember the pain of thirst, do not forget the danger of suffocation. Now, Hamet, tell me your request.

O being, kind and beneficent, says Hamet, let thine eye pardon my confusion. I entreat a little brook, which in summer shall never be dry, and in winter shall never overflow.

It is granted, replied the genius; and immediately

he opened the ground with his sabre, when a fountain bubbling up under their feet, scattered its rills over the meadows; the flowers renewed their fragrance, the trees spread a greener foliage, and the flocks and herds quenched their thirst.

Then turning to Raschid, the genius invited him likewise to offer his petition. I request, says Raschid, that thou wilt turn the Ganges through my grounds, with all his waters, and all their inhabitants.

Hamet was struck with the greatness of his neighbour's sentiments, and secretly repined in his heart, that he had not made the same petition before him: when the genius spoke: Rash man, be not insatiable! Remember, to thee that is nothing which thou canst not use: and how are thy wants greater than the wants of Hamet?

Raschid repeated his desire, and pleased himself with the mean appearance that Hamet would make in the presence of the proprietor of the Ganges. The genius then retired towards the river, and the two shepherds stood waiting the event.

As Raschid was looking with contempt upon his neighbour, on a sudden was heard the roar of torrents, and they found, by the mighty stream, that the mounds of the Ganges were broken. The flood rolled forward into the lands of Raschid, his plantations were torn up, his flocks overwhelmed, he was swept away before it, and a crocodile devoured him.

JOHNSON.

MAY THE SEVENTEENTH.

On the Inequalities of the Surface of the Globe.

WERE the earth an even and regular plain, instead of that beautiful variety of hills and valleys, of verdant forests and refreshing streams, which at present delights our senses, a dismal sea would cover the whole face of the globe, and at best it would be only the habitation of fishes.

It is not therefore to be supposed, that even in its origin the surface of the earth was perfectly regular; and since its first production, a variety of causes, such as the motion of the waters, subterraneous fires, winds, and other circumstances, have greatly contributed to the increase of its irregularity. The greatest inequalities of the globe are the depths of the ocean, compared to the elevations of mountains. The depth of the sea is very different, even

to great distances from the land; it is said there are parts above a mile deep: but these are few, and the general profundities are from sixty to one hundred fathoms.

In general the mountains between the tropics are loftier than those of the temperate zones, and these more than those of the frigid zones; so that the nearer we approach the equator, the greater are the inequalities. These inequalities, although very considerable with respect to us, are nothing when considered with respect to the globe itself; for the earth, which appears to us crossed and cut by the enormous height of mountains, and by the frightful depth of the sea, is nevertheless, relatively to its bulk, very slightly furrowed with irregularities so very trifling, that they can cause no perceptible difference to the visible figure of the globe.

Precipices are formed by the sinking of rocks, the base of which sometimes gives way more on one side than the other, by the action of the air and frost, which splits and divides them; and by the impetuous fall of torrents which opens passages, and carries along with them all that opposes their violence.

But the vast and enormous concavities found at the summit of mountains, have generally been formed by the operation of fire. These concavities were formerly the craters or mouths of volcanoes; and all the matter which is there deficient, has been ejected by the action and explosion of their fires, which are since become extinct through the defect of combustible matter. The concavity of mount Ararat is surrounded with black and burnt rocks, as some day those of Etna, Vesuvius, and other volcanoes will be, when they have consumed all the combustible matters they include.

Great cavities and deep mines are generally in mountains, and never descend to a level with the plains; therefore by these cavities we are made acquainted only with the inside of a mountain, and not at all with the internal part of the globe.

BUFFON.

MAY THE EIGHTEENTH.

Resentment.

RESENTMENT may be distinguished into *anger* and *revenge*. *Anger* is the pain we suffer upon the receipt of an injury or affront, with the usual effects of that pain upon ourselves. *Revenge* is the inflicting of pain upon the per-

son who has injured or offended us, further than the just ends of punishment or reparation require.

Reflections proper for this purpose are the following : the possibility of mistaking the motives from which the conduct that offends us proceeded : how often our own offences have been the effect of inadvertence, when they were construed into indications of malice : the inducement which prompted our adversary to act as he did, and how powerfully the same inducement has at one time or other operated upon ourselves : that he is suffering perhaps under a contrition which he is ashamed, or wants opportunity, to confess ; and how ungenerous it is to triumph by coldness or insult, over a spirit already humbled in secret : that the returns of kindness are sweet, and that there is neither honour, nor virtue, nor utility in resisting them. To this we should particularly advert ; for too many think themselves bound to keep alive their indignation, when they find it dying away of itself.

We should remember, that others have their passions, their prejudices, their favourite aims, their fears, their cautions, their interests, their sudden impulses, and their varieties of apprehensions, as well as ourselves. We may recollect what has sometimes passed in our minds, when we have been on the wrong side of a quarrel ; and imagine the same to be passing in our adversary's mind now : when we became sensible of our misbehaviour, what palliations we perceived in it, and expected others to perceive ; how we were affected by the kindness, and felt the superiority of a generous reception and ready forgiveness ; how persecution revived our spirit with our enmity, and seemed to justify that conduct in ourselves, which we before blamed.

Add to this the indecency of anger ; how it renders us, while it lasts, the scorn and sport of all about us ; the inconveniences, and irretrievable misconduct, into which our irascibility has sometimes betrayed us ; the friendships it has lost us ; and the sore repentance, which on one account or other it always cost us.

It is necessary, therefore, to habituate ourselves to these reflections, till they arise spontaneously in our minds when they are wanted, that is, instantly upon the receipt of an injury or affront ; and with such force and colouring as both to mitigate the paroxysms of our anger at the time, and at length to produce an alteration in the temper and disposition itself.

PALEY.

MAY THE NINETEENTH.

Of the Commerce of England.

It is well known that commerce and manufactures have greatly contributed to raise the English to be the first and most powerful people in the world ; and that the commerce of England is at this time much greater than that of all the rest of the world united.

Great Britain is, of all countries, the most proper for trade ; as well from its situation as an island, as from the freedom and excellence of its constitution, and from its natural products and considerable manufactures. For exportation, our country produces many of the most substantial and necessary commodities ; as butter, cheese, corn, cattle, wool, iron, lead, tin, copper, leather, copperas, pit-coal, alum, saffron, &c.

Our horses are the most serviceable in the world, and highly valued by all nations, for their hardiness, beauty, and strength. With beef, mutton, pork, poultry, and biscuit, we victual not only our own fleets, but many foreign vessels that come and go. Our iron we export manufactured into great guns, carcasses, bombs, &c.

Prodigious and almost incredible is the value likewise of other goods from hence exported, viz. hops, flax, hemp, hats, shoes, household-stuff, ale, beer, red-herrings, pilchards, salmon, oysters, liquorice, watches, ribands, toys, &c.

There is scarcely a manufacture that is not brought to great perfection in England. Those of woollen and cotton are the most considerable ; and exceed in goodness and quantity those of any other nation. Hardware is another principal article : our locks, edge-tools, guns, swords, and other arms, are of superior excellence : household utensils of brass, iron, and pewter, also, are very prime articles ; and our clocks, watches, and mathematical apparatus, are unrivalled.

Besides the substantial produce and the unrivalled manufactures of the British islands, our fleets rule all the seas on the surface of the globe, and enable us to appropriate to our own benefit the produce of all countries and all climates. By this means we establish and protect our colonies, and enjoy almost a monopoly of sugar, coffee, rum, spices, drugs, silks, cottons, tea, gold, silver, &c. &c. securing supplies for our own use, and becoming carriers or merchants for the supply of other nations.

The prodigious extent of the trade of England, and its

great and rapid increase of late years, will clearly appear from a comparative statement of the imports and exports at different periods ; the value of which, including foreign merchandise and manufactures, in the years undermentioned, was as follows :

	<i>Imports.</i>		<i>Exports.</i>
1700,	£4,956,975	.	£6,034,724
1750,	7,429,739	.	12,877,129
1772,	14,500,000		17,719,000
1783,	13,325,000	.	14,741,000
1792,	19,629,000	.	24,878,000
1797,	21,450,000	.	28,917,000
1800,	27,992,464	.	33,792,386
1813,	28,600,000	.	43,200,000

The number of registered trading vessels belonging to the British dominions, employed in the year 1813, was 23,640; their tonnage was 2,514,484; and the number of men required to navigate them was 165,557.

The English manufactures have been lately estimated at the annual value of 66,600,000*l.*, and supposed to employ 1,585,000 people: of this sum the woollen manufacture is stated to produce about 15,000,000*l.*; the leather, 10,000,000*l.*; the iron, tin, and lead, 10,000,000*l.*; and the cotton, 14,000,000*l.*

MAY THE TWENTIETH.

On Cruelty to Animals.

I WOULD not enter on my list of friends
 (Though grac'd with polish'd manners and fine sense,
 Yet wanting sensibility) the man
 Who needlessly sets foot upon a worm.
 An inadvertent step may crush the snail,
 That crawls at ev'ning in the public path ;
 But he that has humanity, forewarn'd,
 Will tread aside, and let the reptile live.
 The creeping vermin, loathsome to the sight,
 And charg'd perhaps with venom, that intrudes,
 A visitor unwelcome, into scenes
 Sacred to neatness and repose, th' alcove,
 The chamber, or refectory, may die :
 A necessary act incurs no blame.
 Not so when held within their proper bounds
 And guiltless of offence, they range the air,
 Or take their pastime in the spacious field :

There they are privileg'd ; and he that hunts
Or harms them there is guilty of a wrong,
Disturbs the economy of Nature's realm,
Who when she form'd, design'd them an abode.
The sum is this : — If man's convenience, health,
Or safety, interfere, his rights and claims
Are paramount, and must extinguish theirs.
Else they are all, the meanest things that are,
As free to live, and to enjoy that life,
As God was free to form them at the first,
Who in his sovereign wisdom made them all.
Ye, therefore, who love mercy, teach your sons
To love it too. The spring-time of our years
Is soon dishonour'd and defil'd in most
By budding ills, that ask a prudent hand
To check them. But, alas ! none sooner shoots,
If unrestrain'd, into luxuriant growth,
Than cruelty, most dev'lish of them all.
Mercy to him that shows it, is the rule
And righteous limitation of its act,
By which Heav'n moves in pard'ning guilty man ;
And he that shows none, being ripe in years,
And conscious of the outrage he commits,
Shall seek it and not find it, in his turn. COWPER.

MAY THE TWENTY-FIRST.

The Science of Geography.

THE fundamental principles of this science are of the greatest utility in the daily avocations of life. To be well acquainted with the general divisions of land and water ; the subdivisions of empires, kingdoms, and states ; the names of places, and their respective situations ; is a branch of knowledge which it is impossible to want, without the self-conviction of the grossest ignorance.

This, however, is one of the least important provinces of geography. When we consider the earth as peopled with various nations, and acquire an insight into their manners, religion, government, and pursuits ; then geography assumes its most attractive form, and fills the mind with ideas worthy of itself.

If we regard this science only as an useful auxiliary to trade, it is no insignificant acquisition : to be well acquainted with the natural and artificial productions of countries, their manufactures, exports, and imports, is an

important consideration. But the student must not stop here: he must enlarge his conceptions by comparative researches into men and manners; he must trace the origin and influence of laws, the effects of civilisation, and modes of life, through all their obliquities and variety of shades; and, while he indulges in those wide speculations, he may deduce from what is good, maxims to regulate his own conduct or to enlighten others; from what is bad, he may learn to avoid the errors that human frailty, aided by prejudice, has so abundantly disseminated over the globe, and pity where he cannot admire.

The Hottentots and Tartars, yet in the dawn of reason, with barely the features of men, and still remote from civilisation and refinement, will afford reflections on what human nature is, devoid of learning and the arts. The absurd theology of barbarous nations, where a fantastic image of their own framing, a snake, or an insect, is the object of divine adoration, will display the sublimity of that religion which is founded on a sense of infinite perfection and almighty power.

The savage institutions of many kingdoms, where man is degraded to a slave, will teach the value of government founded on law, and supported by social order.

To confine all excellence to the country in which we were born, is the defect of an uninformed judgment; but to love our own country best, and to study to promote its interests and extend the honour of its name, is compatible with the finest feelings and the most Christian charity. It ennobles us as men and citizens.

In all these points of view, geography will serve for an instructor and guide. It may well be defined the science of life and manners, of laws and government; and is as useful to the man, as it is ornamental to the scholar.

MAVOR'S *Natural History*.

MAY THE TWENTY-SECOND.

Examples of diligent Employment of Time.

WE all complain, says the philosopher Seneca, of the shortness of time, and yet have much more than we know what to do with. Our lives are spent either in doing nothing at all, or in doing nothing to the purpose, or in doing nothing that we ought to do. We are always complaining that our days are few, and acting as though there would be no end of them.

Alfred the Great was one of the wisest, the best, and most beneficent monarchs that ever swayed the sceptre of England; and his example is highly memorable. — Every hour of his life had its peculiar allotted business. He divided the day and night into three portions of eight hours each; and though much afflicted with a very painful disorder, he assigned only eight hours to sleep, meals, and exercise; devoting the remaining sixteen, one half to reading, writing, and prayer, and the other to public business. So sensible was this great man that time was not a trifle to be dissipated, but a rich talent intrusted to him, for which he was accountable to the Great Dispenser of it!

We are told by historians, that queen Elizabeth, except when engaged by public or domestic affairs, and the exercises necessary for the preservation of her health and spirits, was always employed either in reading or writing, in translating from other authors, or in compositions of her own.

Gassendi, the celebrated philosopher, was perhaps one of the hardest students that ever existed. He generally rose at three o'clock in the morning, and read or wrote till eleven, when he received the visits of his friends. He afterwards at twelve made a very slender dinner, at which he drank nothing but water, and sat down to his books again at three. There he remained till eight o'clock; and after having eaten a very light supper, he retired to bed at ten.

Among the ancient Indians there were a set of men called gymnosophists, who had a great aversion to sloth and idleness. When the tables were spread for their repast, the assembling youths were asked by their masters in what useful task they had been employed from the hour of sun-rise. One perhaps represented himself as having been an arbitrator, and succeeded by his prudent management in composing a difference between friends. A second had been paying obedience to his parents' commands. A third had made some discovery by his own application, or learned something by another's instruction. But he who had done nothing to deserve a dinner, was turned out of doors without one, and obliged to work while the others enjoyed the fruits of their application.

MAY THE TWENTY-THIRD.

Principal Varieties of the Human Race.

THOUGH there cannot be a doubt, that all mankind, however disseminated over the globe, sprung from one

parent stock, yet the influence of climate, civilisation, government, and mode of life, has created sensible, and great diversities in colour, form, and stature. The boundary of a river, the intervention of a hill, custom, accident, or fashion, may sometimes occasion shades of distinction, which the most incautious observer will recognise. On the other hand long-continued intercourse will assimilate two nations by degrees, till at last the difference between them will be imperceptible. There are, however, some broad lines of distinction between the same species, which it is the business of the naturalist to remark, and the philosopher to explain.

In taking an extensive view of our species, there do not appear to be above five or six varieties sufficiently distinct to constitute families; and in these the distinctions are more trivial than are frequently seen in the lower classes of animals. In all climates, man preserves the erect deportment and the natural superiority of his form. There is nothing in the shape or faculties which designates a different original; and other causes connected with the climate, soil, customs, and laws, sufficiently account for the change which they have produced.

The polar regions exhibit the first distinct race of men. The Laplanders, the Esquimaux Indians, the Samoied Tartars, the inhabitants of Nova Zembla, the Borandians, the Greenlanders, and the Kamtschadales, may be considered as forming a race of people all nearly resembling each other in stature, complexion, habits, and acquirements.

Born under a rigorous climate, confined to particular aliments, and subject to numerous hardships, it seems as if their bodies and their minds have not had scope to expand. The extreme cold has produced nearly the same effect on their complexions, as intense heat has on the natives of the tropical regions: they are generally of a deep brown, inclining to actual black. Diminutive and ill-shaped, their aspects are as forbidding as their manners are barbarous. Their visage is large and broad, the nose flat and short, the eyes brown suffused with yellow, the eye-lids drawn toward the temples, the cheek-bones high, the lips thick, the voice effeminate, the head large, and the hair black and straight. The tallest do not exceed the height of five feet, and many not more than four. Among these nations, feminine beauty is almost unknown; and little difference is to be discerned in the external appearance of the sexes.

BURRO.

MAY THE TWENTY-FOURTH.

Character of Oliver Cromwell

OLIVER CROMWELL was of a robust make and constitution; his aspect manly though clownish. His education extended no further than a superficial knowledge of the Latin tongue, but he inherited great talents from nature; though they were such as he could not have exerted to advantage at any other juncture than that of a civil war inflamed by religious contests and courtly corruptions.

His character was composed of an amazing combination of enthusiasm, hypocrisy, and ambition. He was possessed of courage and resolution, that overlooked all dangers, and saw no difficulties. He dived into the characters of mankind with wonderful sagacity, while he concealed his own purposes under an impenetrable veil of dissimulation.

He reconciled the most atrocious crimes to the most rigid notions of religious obligations. From the severest exercise of devotion, he relaxed into the most ridiculous and idle amusements.

Cromwell possessed a vigorous and active understanding; and could assume, whenever he pleased, that dignity of manners which befitted his high station. But when he relaxed from the toils of war, or the cares of government, his amusements frequently consisted of the lowest buffoonery.

Before the trial of Charles I., when a meeting was held between the chiefs of the republican party and the general officers, to concert the model of the intended new government, — after the debates on this most interesting and important subject, Ludlow informs us, that Cromwell, by way of frolic, threw a cushion at his head; and even in the high court of justice, in that solemn moment when he took the pen to sign the warrant for the unhappy monarch's execution, he could not forbear the levity of daubing the face of his neighbour with the ink.

Cromwell was cruel and tyrannic from policy; just and temperate from inclination; perplexed and despicable in his discourse; clear and consummate in his designs; ridiculous in his reveries; generally respectable in his conduct; a steady friend, a good husband, and a kind father; in a word, he was one of the strangest compounds of political knavery and private virtue, craft and magnanimity,

absurdity and good sense, that we find on record in the annals of mankind.

Oliver Cromwell died on the 3d of September, 1658; and Richard, his son, was proclaimed Protector in his room: but Richard, being of a very different disposition from his father, resigned his authority the 22d of April, 1659; and soon after signed his abdication in form, and retired to the continent. He travelled there for a few years after his resignation, and then returned to England; residing in peace as a private country gentleman, upon his paternal estate at Cheshunt, where he died, highly respected for his social virtues, at the age of 86.

MAY THE TWENTY-FIFTH.

Varieties of the Human Race. (Continued.)

BUT it is not only in deformity, in dwarfishness, colour, and outline of features, that the inhabitants of the polar regions resemble each other. There is also a marked conformity in their manners, propensities, and habitual ignorance. They certainly display a degree of activity and resolution in pursuit of their game; but they seem incapable of vigorous exertions either of body or mind, unless when their ingenuity is stimulated by necessity, or inevitable difficulties prompt the temporary exertion of courage to evade or surmount them.

With regard to their morals, they possess all the virtues of simplicity, and all the vices of ignorance. They entertain but few religious ideas, and these are rather superstitious than rational. Providence, however, in denying them so many natural blessings which the nations of more temperate climes enjoy, has given contentment as a counterbalance for these deprivations. They have a very high opinion of themselves, and, it is said, relieve the tedium of their social meetings by ridiculing European manners and pursuits. War is the object of their detestation; and though attempts have been made to discipline them as soldiers, and to draw them into the field, every measure of this kind has hitherto proved unsuccessful.

In proportion as we approach the north pole, mankind seems to dwindle in energy and importance of character, till we reach those high latitudes that forbid rational, if not all animal life. The gradations, however, vary almost imperceptibly; but on the southern borders we find people

of a large stature and more noble form, which, compared with those of the northern, exhibit a striking contrast, and prove the amazing influence of climate on whatever lives and breathes.

The *second* great existing variety in the human species seems to be the Tartar race, whence it is probable that the natives of the northern regions originally spring. The Tartar country, in its common acceptation, comprehends a very considerable part of Asia, and consequently is peopled by natives of very different forms and complexions; yet there are leading features of distinction between the whole race, and the people of any other country.

They all have the upper part of the visage very broad, and early wrinkled; the lower narrow, and approaching to a point at the chin; their eyes are small, and wide apart, their noses short and flat, their cheek-bones high, the eyebrows thick, the hair black, and the complexion olive. In general they are of the middle stature, strong, robust, and healthy. Some of the tribes may be comparatively handsome; but, according to our ideas of beauty, they all fall very short of that appellation; and the Calmucs, in particular, are not only ugly, but frightful. **MAVOR.**

MAY THE TWENTY-SIXTH.

On History.

HISTORY is an account of whatever remarkable has been done by any country in general, or by any number of people, or by any one man; thus, the Roman history is an account of what the Romans did as a nation; the history of Catiline's conspiracy, is an account of what was done by a particular number of people; and the history of Alexander the Great, written by Quintus Curtius, is the account of the life and actions of one single man. History is, in short, an account or relation of any thing that has been done.

History is divided into sacred and profane, ancient and modern.

Sacred History is the Bible; that is, the Old and New Testament. The Old Testament is the history of the Jews, who were God's chosen people; and the New Testament is the history of Jesus Christ, the Son of God.

Profane History is the account of the heathen gods; such as you read of in Ovid's *Metamorphoses*, and which

you will better understand when you read Homer, Virgil, and the other ancient poets.

Ancient History is an account of all the kingdoms and countries in the world down to the end of the Roman empire.

Modern History is the account of the kingdoms and countries of the world since the destruction of the Roman empire.

The perfect knowledge of history is extremely necessary; because as it informs us of what was done by other people, in former ages, it instructs us what to do or avoid in the like cases. Besides, as it is the common subject of conversation, it is a shame to be ignorant of it.

The best work with which to begin the study of history, and indeed the only work adapted to the practical use of schools and tutors, is Robinson's Grammar of History: and the best, if not the only complete view of universal history, is that published by Mavor. Robinson's Grammar, and his smaller histories, as a ground-work, followed by the attentive perusal of the copious work of Mavor, will convey a sufficient knowledge of history for the general purposes of life.

COLLINS.

MAY THE TWENTY-SEVENTH

Filial Affection. (A Sunday Lesson.)

WE may venture to assert, that if a man has any well-wishers, any benefactors on earth to whom he is bound by indissoluble ties of gratitude, his parents are the persons.

Indeed one is willing to think, that many of those young people whose behaviour is so blameable, are not sensible of the uneasiness it occasions, nor at all aware how much anguish is endured on their account.

They run heedlessly forward in the broad and open path, and have no thought but of the pleasure they are pursuing.

Yet stop, young man, we beg, a little, to look towards thy poor parents. Think it not too much to bestow a moment's reflection upon those who never forget thee. Recollect what they have done for thee. Remember all — all, indeed, thou canst not: alas! ill had been thy lot, had not their care of thee begun before thou couldst remember, or know any thing.

Now so proud, self-willed, inexorable, thou couldst

then only ask by wailing, and move them with thy tears. And they were moved: their heart was touched with thy distress; they relieved and watched thy wants before thou knewest thine own necessities or their kindness: they clothed thee; thou knewest not that thou wast naked: thou askedst not for bread; but they fed thee. And ever since, in short, (for the particulars are too many to be recounted, and too many surely to be all utterly forgotten,) it has been the very principal endeavour, employment, and study of their lives, to do service to thee.

And remember, for this too is of moment, it is all out of pure, unfeigned affection. Other friends mostly expect their civilities to be repaid, and their kind offices returned with interest: but parents have no thoughts like these. — They seek not thine, but thee. Their regard is real, and hearty, and undesigning. They have no reflex views upon themselves; no oblique glances towards their own interest. If by all their endeavours they can obtain their child's welfare, they arrive at the full accomplishment of their wishes. They have no higher object of their ambition. Be thou but happy, and they are so.

And now tell me: is not something to be done, I do not say for thyself, but for them? If it be too much to desire of thee to be good, and wise, and virtuous, and happy, for thy own sake; yet be happy for theirs. Think that a sober, upright, and let me add a religious life, besides the blessings it will bring upon thy own head, will be a fountain of unfailing comfort to thy declining parents, and make the heart of the aged sing for joy.

What shall we say? Which of these is happier; the son that maketh a glad father, or the father blessed with such a son?

Fortunate young man! who hast an heart open so early to virtuous delights: and canst find thy own happiness, in returning thy father's blessing upon his own head.

And happy father! whose years have been prolonged, not (as it often happens) to see his comforts fall from him one after another, and to become at once old and destitute; but to taste a new pleasure, not to be found among the pleasures of youth, reserved for his age; to reap the harvest of all his cares and labour, in the duty, affection, and felicity, of his dear child. His very look bespeaks the inward satisfaction of his heart. The infirmities of age sit light on him. He feels not the troubles of life; he smiles at the approach of death; sees himself still living and honoured in the memory and the person of his son, his

other, dearer self; and passes down to the receptacle of all the living, in the fulness of content and joy.

OGDEN.

MAY THE TWENTY-EIGHTH.

Obligations of Charity.

I MAY be told, that mercy is often remembered. Yes, I confess it; and how should it not be remembered? It is the doctrine of all ages and people: in the darkest periods of human reason, when vice the most atrocious was seated upon altars, and honoured by the incense of nations, sensibility to distress remained a sacred, though solitary, virtue, amidst the prevailing corruptions of the world. In regions bound in by eternal frost, uncivilised and almost inaccessible, where element and sterility combine to render subsistence precarious, and seem to shut up the heart, relief is extended to those whom age or infirmity renders unable to toil. Why then should we talk of occasionally obeying a sentiment which, in the children of nature, is a burning and invariable instinct? Were I to tell the wildest barbarian that our bread is often withheld from the hungry; that some of us are clothed in soft raiment, and wallow in all the enjoyments of luxury and ease, while multitudes are suffered to perish from the absolute want of aliment; while poverty stalks round us ravenous and despairing; while mothers almost devour their young, and orphans dispute offals with the brutes; all barbarous and uncivilised as we call him, I should fill his honest heart with astonishment and horror! and yet we flatter ourselves we are merciful!

Look into the divine volume of our law; mark the rule of mercy it lays down, and confess the immensity of our distance from it. What does it declare us to be, but trustees to the estate? Does it not adjudge every shilling we can spare from the reasonable support of our stations, to the widow and the orphan, or charge us with their blood? Is it possible to believe in future retribution, and not to know some uneasy moments on this head? Is it possible, then, that rational and thinking beings must not occasionally tremble at the uncertainty of life, and certainty of judgment? Why are we obliged to use the arts and colouring of eloquence to make appeals to your passions? To search and probe the great body of human misery to the bone? To exhibit it, naked and expiring,

quivering and disjointed? To expose all its miseries and horrors? To mingle our own tears with the tears of the unhappy objects that invoke us? And, after all, why do we often fail? Yes, most deplorably fail? Why does misery often perish in the horrors of famine? or, what is infinitely worse, shoot up in swarms of infamy and guilt?

The impoverished and sequestered parts of a great city would present more than the bloody and terrific image of a neglected field of battle: the moans of the expiring, the agonies of the maimed and mutilated, and your living brethren putrifying unto death, in the ray of that sun that lights you every day to happiness and enjoyment.— Though he, who on the unmade bed of torture, whether from disease or accident, languishes and perishes unassisted and unknown, be eminently wretched; yet the riches, with all the aids they can receive from the skill of an attentive faculty and the countless comforts which affluence can supply, still experience the extremities of disease to be intolerable, and often look to death as a blessing. Great God! what then must the case be, where man, in the same situation, seems equally abandoned by heaven and earth? where famine is the consequence of arrested toil? where families, in consternation, look round, without hope or prospect of relief? where the very covering of the dying victim is often sent by his afflicted heart to support their existence? where the very source of tears is dried up? where deep despair, extorting the language of imprecation against Providence, presents the horrible combat between religion and nature?

O Charity! thou principle of great souls! how glorious are thy works! Thou createst a new world in the moral and physical order. Thou preventest a deluge of indigence! Thou preventest a deluge of vice! Thou throwest an immortal guard round virgin purity! Thou recallest not the dead, but thou givest life and health to the diseased and the expiring!

KIRWAN.

MAY THE TWENTY-NINTH.

The Elements subservient to the Wants of Man.

THE eye of man is turned not towards heaven, as the poets and even some philosophers allege, but to the horizon: so that he may view at once the heaven which illuminates, and the earth which supports him. His visual

rays take in nearly half of the celestial hemisphere, and of the plane on which he treads; and their reach extends from the grain of sand which he tramples under foot, to the star which shines over his head at an immeasurable distance.

Man alone of all animals can enjoy equally the day and the night; he alone can bear to live within the torrid zone, and upon the ice of the frigid. If certain animals be partakers with him in these advantages, it is only by means of his instructions, and under his protection. For this advantage he is indebted to the element of fire, of which he alone is the sovereign lord.

Though the dog is much more intelligent than the monkey, and is a witness every hour of the effects of fire, and accustomed to live only on meat that is dressed; yet if you give him raw flesh, he will never think of roasting it on the coals. This barrier, which separates man from the brute, weak as it may appear, is insurmountable to animals. God has intrusted the first agent in nature to that being alone, who by his reason is qualified to make a right use of it.

This element is universally necessary to human existence, even in the hottest climates. By means of fire alone man guards his habitation by night from the ravenous beasts of prey; drives away the insects which thirst for his blood; and clears the ground of the trees and plants which cover it, the stems and trunks of which would resist every species of cultivation. In every country, with fire he prepares his food, dissolves metals, vitrifies rocks, hardens clay, softens iron, and gives to all the productions of the earth the forms and the combinations which his necessities require.

The benefits which man derives from the air are no less extensive. Few animals are, like him, capable of respiring with equal ease at the level of the sea, and on the summit of the loftiest mountains. Man is the only being that gives to air all the modulations of which it is susceptible. With his voice alone he imitates the hissing, the cries, the singing of all animals; while he enjoys the gift of speech, denied to every other. Sometimes he communicates sensibility to the air: he makes it sigh in the pipe, complain in the flute, threaten in the trumpet, and animate to the tone of his passions the brass, the box-tree, and the reed. Sometimes he makes the air his slave: he forces it to grind, to bruise, and to move to his advantage an endless variety of machinery. In a word, he yokes it to his marine car,

and constrains it to waft him even over the billows of the ocean.

As man is the only being that has the disposal of fire, which is the principle of life, so he alone practises agriculture, which is its support. All frugivorous animals have, like him, occasion for it; and most of them the experience; but no one the practice. The ox never thinks of sowing the grain which he treads out upon the barn-floor; nor the monkey, the maize of the field which he plunders.

ST. PIERRE.

MAY THE THIRTIETH.

Of the Constitution of England.

THE supreme executive power of Great Britain and Ireland is vested by our constitution in a single person, king or queen; for it is indifferent to which sex the crown descends; and the person entitled to it, whether male or female, is immediately intrusted with all the ensigns, rights, and prerogatives, of sovereign power.

The principle duties of the king are expressed in his oath at the coronation, which is administered by one of the archbishops or bishops of the realm, in the presence of the people. This coronation oath is conceived in the following terms:

The archbishop, or bishop, shall say, — Will you solemnly promise and swear to govern the people of this kingdom of England, and the dominions thereunto belonging, according to the statutes in parliament agreed on, and the laws and customs of the same? — The king or queen shall say, I solemnly promise so to do.

Archbishop or bishop. — Will you to the utmost of your power cause law and justice, in mercy, to be executed in all your judgments? — King or queen. I will.

Archbishop or bishop. — Will you to the utmost of your power maintain the laws of God, the true profession of the Gospel, and the Protestant reformed religion established by the law? And will you preserve unto the bishops and clergy of this realm, and to the churches committed to their charge, all such rights and privileges as by the law do or shall appertain unto them, or any of them? — King or queen. All this I promise to do.

After this, the king or queen, laying his or her hand upon the holy Gospel, shall say, The things which I have

here before promised, I will perform and keep: so help me God! and then kiss the book.

This is the form of the coronation oath, as it is now prescribed by our laws; and we may observe, that in the king's part in this original contract are expressed all the duties that a monarch can owe to his people; viz. to govern according to law; to execute judgment in mercy; and to maintain the established religion.

The laws are made by the joint concurrence of the king, the lords, and the commons; and without their joint concurrence cannot be altered or dispensed with.

The house of lords consist of the lords spiritual, that is to say, of two archbishops and twenty-four bishops, with four bishops from Ireland. The lords temporal consist of all the peers of the realm; the bishops not being in strictness held to be such, but merely lords of parliament. Some of the peers sit by descent, as do all ancient peers; some by creation, as do all the new-made ones; others, since the unions with Scotland and Ireland, by election, which is the case of the sixteen peers who represent the body of the Scotch nobility, and the twenty-eight Irish peers who represent the Irish nobility. The number of peers is indefinite, and may be increased at will by the power of the crown.

The house of commons consists of the representatives of the people chosen every seven years, or on a dissolution by the crown.

The counties are represented by knights, elected by the proprietors of lands; the cities and boroughs are represented by citizens and burgesses, chosen by the mercantile part, or supposed trading interest of the nation. The number of English representatives is 513, of Scotch 45, and of Irish 100; in all 658.

These are the constituent parts of parliament; the king, the lords spiritual and temporal, and the commons; parts, of which each is so necessary, that the consent of all three is required to make any new law that shall bind the subject. Whatever is enacted for law by one, or by two only, of the three is no statute; and no regard is due to it unless in matters relating to their own privileges. GUTHRIE.

MAY THE THIRTY-FIRST.

The Origin of Language.

If we suppose a period before any words were invented

thod of communicating to others what they felt, than by the cries of passion, accompanied with such motions and gestures as were further expressive of passion ; for these are the only signs which Nature teaches to all men, and which are understood by all. One who saw another going into some place where he himself had been frightened or exposed to danger, and who sought to warn his neighbour of the danger, could contrive no other way of doing so than by uttering those cries, and making those gestures, which are the signs of fear ; just as two men at this day would endeavour to make themselves understood by each other, who should be thrown together on a desolate island, ignorant of each other's language. Those exclamations, therefore, which by grammarians are called *interjections*, uttered in a strong and passionate manner, were beyond doubt the first elements or beginnings of speech.

Interjections would be followed by names of objects, or *nouns*, these by names of actions, or *verbs* ; these by qualities of nouns and actions, as *adjectives* and *adverbs* ; and these would be successively followed by *prepositions*, *pronouns*, *articles*, and *conjunctions*.

When more enlarged communication became necessary, and names began to be assigned to objects, in what manner can we suppose men to have proceeded in this assignation of names, or invention of words ? Undoubtedly by imitating as much as they could the nature of the object which they named, by the sound of the name which they gave to it.

Wherever objects were to be named, in which sound, noise, or motion were concerned, the imitation by words was abundantly obvious. Nothing was more natural than to imitate by the sound of the voice, the quality of the sound or noise which any external object made, and to form its name accordingly. Thus in all languages we find a multitude of words that are evidently constructed upon this principle. A certain bird is termed a *cuckoo*, from the sound which it emits. When one sort of wind is said to *whistle*, and another to *roar* ; when a serpent is said to *hiss*, a fly to *buzz*, and falling timber to *crash* ; when a stream is said to *flow*, and hail to *rattle* ; the analogy between the word and the thing signified is plainly discernible.

BLAIR.

JUNE THE FIRST.

Natural Phenomena of the Month of June.

JUNE, in this climate, is what the Grecian poets represented May. It is the most lovely month of the year. Summer has commenced, and warm weather is established; yet the heats rarely rise to excess, or interrupt the enjoyment of those pleasures which the scenes of Nature at this period afford. The trees are in their fullest dress; and a profusion of flowers is every where scattered around.

One of the earliest rural employments of this month is the shearing of sheep; a business of much importance in various parts of the kingdom, where wool is one of the most valuable products. England has for many ages been celebrated for its breeds of sheep; which yield wool of various qualities, suited to different branches of the woollen manufacture: the downs of Dorsetshire, and other southern and western counties, feed sheep, the fine short fleeces of which are employed in making the best broad-cloths: the coarser wool of Yorkshire and the northern counties is used in the narrow cloths: the large Leicestershire and Lincolnshire sheep are clothed with long thick flakes proper for the hosiers' use; and every other kind is valuable for some particular purpose.

In the hedges the place of the hawthorn is supplied by the flowers of the hip, or dog-rose, the different hues of which, from a deep crimson to a light blush, and even pure white, form a very elegant variety of colour; and of some the smell is peculiarly fragrant. Some time after, the woodbine and honeysuckle begin to blow; and these, united with the rose, give our hedges their highest beauty and fragrance.

The several kinds of corn come into ear and flower this month; as do likewise numerous species of grass. In Europe the principal kinds of corn are wheat, rye, barley, and oats. In Asia rice is most cultivated. In Africa and the West Indies, maize or Indian corn.

The grasses are valuable for their leaves and stalks, or herbage, which are the principal food of all domestic cattle; this cut down and dried is *hay*, the winter provision of cattle in all the temperate and northern climates.

The latter part of June is the beginning of hay-harvest for the southern and middle parts of the kingdom. This

is one of the most busy and agreeable of rural occupations. Both sexes and all ages are engaged in it. The fragrance of the new-mown hay, the gaiety of all surrounding objects, and the genial warmth of the weather, conspire to render it a season of pleasure and delight. AIKIN.

JUNE THE SECOND.

Character of Charles II.

If we survey the character of Charles II. in the different lights of which it will admit, it will appear very various, and give rise to different and even opposite sentiments.

When considered as a companion, he appears the most amiable and engaging of men; and indeed, in this view, his deportment must be allowed altogether unexceptionable. His love of raillery was so tempered with good-breeding, that it was never offensive. His propensity to satire was so checked by discretion, that his friends never dreaded becoming the object of it. His wit, to use the expression of one who knew him very well, and who was himself a good judge, could not be said so much to be very refined or elevated (qualities apt to beget jealousy and apprehension in company) as to be a plain, gaining, well-bred, recommending kind of wit; and though, perhaps, he talked more than strict rules of behaviour might permit, men were so pleased with the affable communicative deportment of the monarch, that they always went away contented both with him and with themselves.

In the duties of private life his conduct, though not free from exception, was in the main laudable. He was an easy generous lover, a civil obliging husband, a friendly brother, an indulgent father, and a good-natured master. The voluntary friendships, however, which this prince contracted, nay, even his sense of gratitude, were feeble; and he never attached himself to any of his ministers or courtiers with a sincere affection. He believed them to have no other motive in serving him than self-interest; and he was ready, in his turn, to sacrifice them to present ease or convenience.

When we consider him as a sovereign, his character, though not altogether destitute of virtue, was in the main dangerous to his people, and dishonourable to himself.

Negligent of the interests of the nation, careless of its glory, averse to its religion, jealous of its liberty, lavish of its treasure, sparing only of its blood; he exposed it by his measures, though he ever appeared but in sport, to the danger of a furious civil war, and even to the ruin and ignominy of a foreign conquest. Yet all these enormities, if fairly and candidly examined, may be imputed, in a great measure, to the indolence of his temper: a fault which, however unfortunate in a monarch, it is impossible for us to regard with great severity.

It has been remarked of this king, that he never said a foolish thing, nor ever did a wise one: a censure, which, though carried too far, seems to have had some foundation in his character and deportment.

He died February the 6th, 1685, aged 54. HUME.

JUNE THE THIRD.

The Presence of God. (A Sunday Lesson.)

IN all companies and in all places remember the presence of God: walk continually as if under the view of his all-seeing and observing eye; often considering that God is every where present, and then you will study to be every where holy.

God is every where present by his power. He rolls the orbs of heaven with his hand, he fixes the earth with his foot, he guides all the creatures with his eye, and refreshes them with his influence; and makes the powers of hell to shake with his terrors. There is not one hollowness in the bottom of the sea, but he shows himself to be Lord of it, by sustaining there the creatures that come to dwell in it: and in the wilderness, the bittern and the stork, the lion and the elephant, live upon his provisions, and feel the force of his almightiness.

Let every thing you see represent to your spirit the presence, the excellency, and the power of God. In the face of the sun you may see God's beauty; in the fire you may feel his heat warming; in the water his gentleness to refresh you: it is the dew of heaven that makes your field give you bread; in all things it is the bounty of God that ministers to your necessities.

This consideration of the Divine presence is apt to produce joy and rejoicing in God; we delight in being of the same household with God: he is with us in our natural

actions to preserve us, in our recreations to restrain us, in our public actions to applaud or approve us, in our private actions to observe us, in our sleep to guard us, in our watchings to refresh us; and if we walk with God in all his ways, as he walks with us in all ours, we shall find perpetual reasons to enable us to keep that rule of his, "Rejoice in the Lord always!"

TAYLOR.

JUNE THE FOURTH.

Ice and Ice Islands in the Ocean.

IF we look upon a map of the world, we shall find that the waters occupy three times more space than the land. Although the ocean is but one extensive sheet of water, continued over every part of the globe without interruption, yet geographers have distinguished it by different names, for the Atlantic, the Northern, Southern, Pacific, and Indian Oceans.

In the temperate climates the sea is never frozen; but the polar regions are obstructed with mountains of ice that render them impassable. These tremendous floats are of different magnitudes; sometimes rising more than a thousand feet above the surface of the water; sometimes diffused into plains of above two hundred leagues in length, and in many sixty or eighty broad. They are usually divided by fissures; one piece following another so close, that a person may step from one to the other. Sometimes mountains are seen rising amidst these plains, and presenting the appearance of a variegated landscape, with hills and valleys, houses and towers.

There are two sorts of ice floating in these seas; the flat ice and the mountain ice: the one is formed of sea-water, the other of fresh. The flat, or driving ice, is entirely composed of sea-water; which, when dissolved, is found to be salt; and is readily distinguished from the mountain or fresh-water ice, by its whiteness and want of transparency: this ice is much more terrible to mariners than that which rises in lumps: a ship can avoid the one, as it is seen at a distance; but it often gets in among the other, which, sometimes closing, crushes it to pieces.

The mountains of ice are often incorporated with earth, stones, and brushwood, washed from the shore. On these also are sometimes found, not only earth, but nests with birds' eggs, at several hundred miles from land: these

mountains are usually seen in the spring, and after a violent storm, driving out to sea : where they at first terrify the mariner ; and are soon after dashed to pieces by the continual washing of the waves, or driven into the warmer regions of the south to be melted away.

A body of ice is often prominent far over the rocks. It does not melt on the upper surface, but underneath ; and also cracks into many larger or smaller clefts, whence the thawed water trickles out. By this it becomes at last so weak, that being overloaded with its own ponderous bulk, it breaks loose, and tumbles down the rocks with a terrible crash. Where it happens to overhang a precipice on the shore, it plunges into the deep with a shock like thunder, and with such an agitation of the water as will upset a boat at a considerable distance, as many a poor Greenlander has fatally experienced.

JUNE THE FIFTH.

Against Cruelty to Animals.

I WAS sitting in my study a few nights ago, when, after long rumination, I determined to go to bed. I soon fell asleep, and imagined myself still in my study, and that I suddenly heard a small shrill voice pronounce these words : " Take your pen : I will dictate." I immediately prepared to write, and the voice dictated the following narrative :

I was the eldest son of a country gentleman, who possessed a large estate ; and, when I was about nineteen years of age, I fell with my horse as I was hunting. My neck was dislocated with the fall, and I died immediately : but I found myself the next moment, with inexpressible grief and astonishment, existing under the shape of a mongrel puppy, in the stable of an inn, that was kept by a man who had been my father's butler.

I was indeed greatly caressed ; but my master, in order, as he said, to increase my beauty as well as my strength, soon disencumbered me of my ears and tail. Besides the pain I suffered in the operation, I experienced the disadvantages of this mutilation in a thousand instances : this, however, was but small part of the calamity which in this state I was appointed to suffer. My master had a son about four years old, who was still a greater favourite than myself, and his passions having

been always indulged as soon as they appeared, he was encouraged to gratify his resentment against any thing, whether animate or inanimate, that had offended him, by beating me; and, when he did any mischief, the father, or the mother, or the maid, was sure to chastise me in his stead.

This treatment from persons whom I had been accustomed to regard with contempt, and command with insolence, was not long to be borne; early one morning, therefore, I departed.

I continued my journey till the afternoon without stopping: about four o'clock I passed through a village, and perceiving a heap of shavings, that were sheltered from the wet by the thatch of a house which some carpenters were repairing, I crept, as I thought, unnoticed into the corner, and laid myself down upon them. But a man who was planing a board, observing that I was a strange dog, and of a mongrel breed, resolved to make himself and his companions merry at my expense. For this purpose, having made a hole about two inches diameter in a piece of deal, he suddenly caught me up, and putting the remainder of my tail through this diabolical engine, he made it fast by driving in a wedge with a heavy mallet, which, crushing the bone, put me to inexpressible torment.

The moment he set me down, the wretches who had been spectators of this trick, burst into immoderate laughter at the awkward motions by which I expressed my misery, and my ridiculous attempt to run away from that which I could not help carrying with me. They hooted after me till I was out of their sight: however, fear, pain, and confusion, still urging me forward with involuntary speed, I ran with such force between two pails that were not far enough asunder to admit my clog, that I left it, with the remainder of my tail, behind me.

I then found myself in a farm-yard; and fearing that I should be worried by the mastiff, which I saw at a distance, I continued my flight: but some peasants who were at work in a neighbouring barn, perceiving that I ran without being pursued, that my eyes were inflamed, and that my mouth was covered with foam, imagined that I was mad, and knocked out my brains with a flail.

JUNE THE SIXTH.

- *Against Cruelty to Animals.* (Continued.)

Soon after I had quitted this maimed and persecuted carcase, I found myself under the wings of a bulfinch, with three others that were just hatched. I now rejoiced in the hope of soaring beyond the reach of human barbarity, and becoming, like my mother, a denizen of the sky; but before I was perfectly fledged, my mother was surprised in her nest by a wicked school-boy, who grasped her so hard to prevent her escape, that she soon after died. He then took the nest with all that it contained, which he deposited in a basket; where I presently lost my three companions in misfortune, by change of food and unskilful management. I survived, and soon after I could feed myself, I was taken by my tyrant's mother, when she went to pay her rent, as a present to her landlord's daughter, a young lady who was extremely beautiful, and in the eighteenth year of her age.

My captivity now began to lose its terrors; I no longer dreaded the gripe of a rude urchin, whose fondness was scarcely less dangerous than his resentment. The confinement of a cage became habitual, and I imagined I could suffer no misery under the patronage of smiles and graces.

Such was my situation, when a young lady from London made a visit to my mistress, and greatly caressed me. To show my sensibility of her favours I hopped upon her finger, and began to sing; as soon as my song was ended, she turned to my mistress, and told her that the dear creature might be made absolutely the sweetest bird in the world, by *only* putting out its eyes, and confining it in a less cage. To this horrid proposal my mistress agreed, upon being again assured that my song would be very greatly improved; and the operation was performed the next day with a hot knitting-needle. I did not long suffer the mournful solitude of perpetual darkness; for a cat came one night into the room, dragged me through the wires of my cage, and devoured me.

I was not displeased to find myself once more delivered from blindness and captivity, and still able to sport upon the breeze in the form of a cockchafer. But I had scarcely entered my new scene of existence, when a gentleman, in whose garden I was feasting on the leaves of a cherry-tree, caught me, and turning to his son, a boy

who had just been put into his first breeches, said, Here, Tommy, here is a bird for you. The thoughtless boy received me with a grin of horrid delight; and, as he had been taught, immediately empaled me alive upon a corking-pin, to which a piece of thread was fastened, and I was doomed to make sport for my young master by fluttering about in the agonies of death. When I was quite exhausted, and could no longer use my wings, he was bid to tread upon me, for I was now good for nothing;—a command with which he mercifully complied, and in a moment crushed me to atoms with his foot.

JUNE THE SEVENTH.

Against Cruelty to Animals. (Concluded.)

FROM a cockchafer I transmigrated into an earthworm, and comforted myself by hoping now to spend my life in peace, by escaping the notice of the most cruel of all creatures—man.

But I did not long enjoy this consolation. I was one morning disturbed by an unusual noise, and perceived the ground about me to shake. I immediately worked my way upward to discover the cause; and the moment I appeared above the surface, I was eagerly snatched up by a man who had stuck a dung-fork in the ground, and moved it backwards and forwards to produce the effect which now happened. I was put into a broken pan with many other associates in misfortune, and soon after disposed of to one of those inhuman monsters who delight in the treacherous and ignoble business of angling.

This inconsiderate trifle carried us next morning to the brink of a river; when I presently saw him take out one of my companions, and, whistling a tune, he passed a barbed hook through the whole length of his body, entering at the head, and bringing it out at the tail! The wretched animal writhed itself about on the bloody hook in torture which cannot be conceived by man, or felt by any creature that is not vital in every part. In this condition he was suspended in the water as a bait for fish, till he was swallowed by an eel, together with the hook on which he was hung! While I was beholding this dreadful spectacle, I made many reflections on the great inequality between the pleasure of catching the prey, and the anguish inflicted on the bait. But these reflections

were presently after lost by my suffering death in the same agonies of which I had been a spectator.

There is not room to relate all that I have since suffered from the thoughtless barbarity of mankind, in the shapes of a cock, a lobster, an eel, and a pig. Let it suffice to say, that I suffered the same kind of death with those who are broken upon the wheel; I was roasted alive before a slow fire; I was skinned, and afterwards thrown, while yet alive, into a frying-pan; and I was scourged to death with small cords, to gratify the wanton appetite of luxury, or contribute to the merriment of the unthinking rabble.

Thus far I had written as amanuensis to an invisible dictator, when, my dream still continuing, I felt something tickle my wrist; and, turning my eyes from the paper to see what 't was, I discovered a flea, which I immediately caught, and killed it by putting it into the candle! At the same instant the flea vanished, a young lady of exquisite beauty stood before me: Thoughtless wretch, said she, hast thou too changed the state of my existence, and exposed me to still greater calamities than any I have yet suffered? As a flea I was thy monitor: and as a flea I might have escaped thy cruelty, if I had not intended thy instruction. Publish, however, what I have communicated: if any man shall be reclaimed from a criminal inattention to the felicity of inferior beings, and restrained from inflicting pain by considering the effect of his actions, I have not suffered in vain.

While I listened to this address, my heart throbbed, and the effort I made to reply awoke me. HAWKESWORTH.

JUNE THE EIGHTH.

Description of Constantinople.

IF we survey Byzantium, in the extent which it acquired with the august name of Constantinople, the figure of the imperial city may be represented under that of an unequal triangle. The obtuse point, which advances towards the east, and the shores of Asia, meets and repels the waves of the Thracian Bosphorus. The northern side of the city is bounded by the harbour; and the southern is washed by the Propontis, or sea of Marmora. The basis of the triangle is opposed to the west, and terminates the continent of Europe. But the admirable form and division of the

circumjacent land and water cannot, without a more ample explanation, be clearly or sufficiently understood.

The harbour of Constantinople, which may be considered as an arm of the Bosphorus, obtained, in a very remote period, the denomination of the Golden Horn. The curve, which it describes, might be compared to the horn of a stag, or, as it should seem, with more propriety, that of an ox. The epithet of golden was expressive of the riches which every wind wafted from the most distant countries into the secure and capacious port of Constantinople. The river Lycus, formed by the conflux of two little streams, pours into the harbour a perpetual supply of fresh water, which serves to cleanse the bottom, and to invite the periodical shoals of fish to seek their retreat in that convenient recess.

As the vicissitudes of tides are scarcely felt in those seas, the constant depth of the harbour allows goods to be landed on the quays, without the assistance of boats; and it has been observed, that in many places the largest vessels may rest their prows against the houses, while their sterns are floating in the water. From the mouth of the Lycus to that of the harbour, this arm of the Bosphorus is more than seven miles in length. The entrance is about five hundred yards broad, and a strong chain could be occasionally drawn across it, to guard the port and city from the attack of a hostile navy.

We are at present qualified to view the advantageous position of Constantinople; which appears to have been formed, by nature, for the centre and capital of a great monarchy. Situate in the forty-first degree of latitude, the imperial city commanded, from her seven hills, the opposite shores of Europe and Asia; the climate was healthy and temperate, the soil fertile, the harbour secure and capacious; and the approach, on the side of the continent, was of small extent and easy defence. The Bosphorus and the Hellespont may be considered as the two gates of Constantinople; and the prince, who possessed those important passages, could always shut them against a naval enemy, and open them to the fleets of commerce.

The preservation of the eastern provinces may, in some degree, be ascribed to the policy of Constantine, as the barbarians of the Euxine, who, in the preceding age, had poured their armaments into the heart of the Mediterranean, soon desisted from the exercise of piracy, and despaired of forcing this insurmountable barrier. When the gates of the Hellespont and Bosphorus were shut, the

capital still enjoyed, within their spacious enclosure, every production which could supply the wants, or gratify the luxury of its numerous inhabitants. The sea-coasts of Thrace and Bithynia, which languish under the weight of Turkish oppression, still exhibit a rich prospect of vineyards, of gardens, and of plentiful harvests; and the Propontis has ever been renowned for an inexhaustible store of the most exquisite fish, that are taken, in their stated seasons, without skill, and almost without labour. But when the passages of the straits were thrown open for trade, they alternately admitted the natural and artificial riches of the north and south, of the Euxine, and of the Mediterranean.

Whatever rude commodities were collected in the forests of Germany and Scythia, as far as the sources of the Tanais and the Borysthenes; whatsoever was manufactured by the skill of Europe or Asia; the corn of Egypt, and the gems and spices of the farthest India, were brought by the varying winds into the port of Constantinople, which, for many ages, attracted the commerce of the ancient world. GIBBON.

JUNE THE NINTH.

Destruction of Carthage.

EARLY in the spring, Scipio Æmilianus renewed the siege of Carthage with additional vigour. He ordered Lælius to attempt the reduction of Cotho, a small island which separated the two ports, while he himself made a feint of an attack on the citadel, in order to divert the attention of the Carthaginians.

This stratagem had the desired effect. Considering their citadel as of the highest importance, most of the Carthaginians flew to its aid, making use of their utmost exertions to repel the Romans. Meanwhile Lælius, having built a bridge over the channel which divided Cotho from the isthmus, soon made himself master of the fortress erected in this island: and no sooner did Scipio understand that Lælius had succeeded, than he abandoned the false attack; and, assailing the adjacent gate of the city, forced his way amidst showers of darts. The approach of night, however, retarding his progress, he made a lodgment within the gate till the return of day; and ordered a reinforcement of 4000 fresh troops to advance from the camp. Prepared, having previously devoted to the infernal

deities those unfortunate Carthaginians whom he had taken prisoners, he advanced at the head of his troops to the market-place.

The Carthaginians, however, though in the last extremity, continued to make a vigorous resistance ; two bodies of men, one placed on the roofs of the houses, the other parading the streets, disputed every step with the most desperate bravery. The slaughter was prodigious, and inexpressibly shocking : the air was rent with the most lamentable shrieks, which would have melted any heart but that of a conqueror wading through the blood of thousands to the attainment of the object of his ambition. Some were massacred by the sword, others precipitated themselves headlong from the tops of the houses, and the streets were covered with dead or mangled bodies.

But the havock was still more dreadful when Æmilianus ordered that quarter of the city adjoining the citadel to be set on fire : multitudes who had hitherto escaped the swords of the enemy, now fell victims to the flames, or perished amidst the ruins of their habitation.

Scipio now delivered up the entire city to be pillaged, in the manner prescribed by the Roman military law. The soldiers were allowed to participate in all the furniture and brass money found in private houses ; but the gold, silver, statues, pictures, and other valuables, were reserved for the appropriation of the quæstors.

Before the demolition of the city, Æmilianus observed the religious ceremonies required on such occasions : he offered sacrifices to the gods, and then caused a plough to be drawn round the walls. This done, the towers, ramparts, and all other public edifices, which it had been the labour of ages to erect, were levelled with the ground ; and finally, fire was set to the remains of this once majestic metropolis ; and although the conflagration began in all quarters at the same time with the utmost fury, seventeen days elapsed before the whole was reduced to ashes.

BURNET.

JUNE THE TENTH.

Of doing as we would be done unto. (A Sunday Lesson.)

“ ALL things whatsoever ye would that men should do unto you, do ye even so unto them ; for this is the Law and the Prophets.”—This sentence is very fitly placed towards the close of our Saviour’s admirable sermon on the

mount, as being, in a great measure, the epitome and sum of what the divine preacher had there expressed more at large.

The rule which makes what we desire of other men, the measure of our dealing towards them, is to be understood not of vicious and excessive desires, but of such only as are fit and reasonable; such requests as we can in our calmest thoughts justify to ourselves and before God.

It may be thought that the rule thus tempered and qualified will not be of any special use or moment to us in the direction of our practice; but the maxim of the text doth effectually assist us in making a free use of our reason, and forming a right judgment of things: for by the means of it we are able to consider our duty without prejudice, and to state the bounds of it impartially and fairly. It teaches us to take two several views of our duty; to eye it in different situations, and under different lights; and by that means more distinctly and thoroughly to discern it.

Human laws are often so numerous as to escape our memories; and sometimes so darkly and inconsistently worded, as to puzzle and embarrass our understandings. But here is a law attended with none of these inconveniences; the grossest minds can scarce misapprehend it, and the weakest memories are capable of retaining it. Nor can there be any one so absurd and unreasonable as not to see and acknowledge the absolute equity of this command in theory, however he may swerve and decline from it in his practice; and to agree upon it as that golden mean which, if universally observed, would make the world universally happy; every man a benefactor, a good angel, a deity as it were to his fellow-creatures; and earth the very image of heaven.

ATTERBURY.

JUNE THE ELEVENTH.

The Mechanical Wonders of a Feather.

EVERY single feather is a mechanical wonder. If we look at the quill, we find properties not easily brought together, — strength and lightness. I know few things more remarkable than the strength and lightness of the quill pen with which I am now writing. If we cast our eye toward the upper part of the stem, we see a material made for the purpose, used in no other class of animals, and in no other part of birds: tough, light, pliant, elastic.

The pith also which feeds the feathers, is neither bone, flesh, menbranc, nor tendon.

But the most artificial part of the feather is the beard, or, as it is sometimes called, the vane; which we usually strip off from one side or both when we make a pen.

The separate pieces of which this is composed are called threads, filaments, or rays. Now the first thing which an attentive observer will remark is, how much stronger the beard of the feather shows itself to be when pressed in a direction perpendicular to its plane, than when rubbed either up or down in the line of the stem; and he will soon discover, that the threads of which these beards are composed are flat, and placed with their flat sides towards each other; by which means, while they easily bend for the approaching of each other, as any one may perceive by drawing his finger ever so lightly upwards, they are much harder to bend out of their plane, which is the direction in which they have to encounter the impulse and pressure of the air, and in which their strength is wanted.

It is also to be observed, that when two threads, separated by accident or force, are brought together again, they immediately reclasp. Draw your finger down the feather which is against the grain, and you break, probably, the junction of some of the contiguous threads; draw your finger up the feather, and you restore all things to their former state.

It is no common mechanism by which this contrivance is effected. The threads or laminæ above-mentioned are *interlaced* with one another; and the interlacing is performed by means of a vast number of fibres or teeth which the threads shoot forth *on each side*, and which hook and grapple together.

Fifty of these fibres have been counted in one-twentieth of an inch. They are crooked, but curved after a different manner; for those which proceed from the thread on the side toward the extremity of the feather are longer, more flexible, and bent downward; whereas those which proceed from the side toward the beginning or quill-end of the feather, are shorter, firmer, and turned upward. When two laminæ, therefore, are pressed together, the crooked parts of the long fibres fall into the cavity made by the crooked parts of the others; just as the latch which is fastened to a door, enters into the cavity of the catch fixed to the door-post, and there hooking itself, fastens the door.

PALEY.

JUNE THE TWELFTH.

Cautions against ill Conduct in Company.

CARRY with you into company all the gaiety and spirits, but as little of the giddiness of youth as you can. The former will charm; but the latter will often, though innocent, implacably offend.

Inform yourself of the characters and situations of the company, before you give way to what your imagination may prompt you to say. There are in all companies more wrong heads than right ones, and many more who deserve than who like censure. Should you, therefore, loudly expatiate in praise of a good quality which some one in the company notoriously wants, or declaim against any ill one with which others are notoriously infected, your reflections, however general and unapplied, will be thought personal, and levelled at those people.

Cautiously avoid talking of the domestic affairs either of yourself or of other people. Yours are nothing to them but tedious gossip; theirs are nothing to you.

Remember that the wit, humour, and jests of most mixed companies, are local. They may thrive very well in that particular soil, but will very seldom bear transplanting. Every company is differently circumstanced, and has its peculiar cant and jargon: which may give occasion to wit and mirth within that circle, but would seem flat and insipid in any other, and therefore will not bear repeating.

Take great care never to repeat in one company what you hear in another. Things seemingly indifferent may by circulation have much graver consequences than you would imagine. Besides there is a general tacit trust in conversation, by which a man is obliged not to report any thing out of it, though he is not immediately enjoined secrecy.

Not to perceive the little weakness, and the idle but innocent affectations of the company, may be allowable as a sort of polite duty. The company will be pleased with you if you do this, and most probably will not be reformed by you if you do not.

CHESTERFIELD.

JUNE THE THIRTEENTH

James II.

It was said by the witty duke of Buckingham, That Charles the Second might have done well if he would, and that James would do well if he could;—an observation which says little for the understanding of James, but a great deal for his heart; and with all the blemishes which his public character is stained, he was not deficient in several qualities necessary to form a good sovereign.

His industry and attention to business were exemplary. he was frugal of the public money; he cherished and extended the maritime power of the empire; and his encouragement of trade was attended with such success, that, according to the observation of the impartial historian Ralph, as the frugality of his administration helped to increase the number of malcontents, so his extreme attention to trade was not less alarming to the whole body of the Dutch, than his resolution not to rush into a war with France was mortifying to their stadtholder.

In domestic life, the character of James, though not irreproachable, was comparatively good. It is true he was in a great measure tainted with that licentiousness of manners which at this time pervaded the whole society, and which reigned triumphant within the circle of the court: but he was never carried into any excesses that trenched deeply upon the duties of social life; and if the qualities of his heart were to be judged only by his conduct in the different characters of husband, father, master, and friend, he might be pronounced a man of very amiable disposition.

The dominion of error over the minds of the generality of mankind is irresistible. James, to the last hour of his life, continued as great a bigot to his political as his religious prejudices. He could not help considering the strength and power of the crown as necessary to the preservation and happiness of the people; and in a letter of advice which he wrote to his son, while he conjures him to pay a religious observance to all the duties of a good sovereign, he cautions him against suffering any encroachment on the royal prerogative.

Among several articles containing excellent instructions on the art of reigning happily and justly, he warns the young prince never to disquiet his subjects in

their property or their religion ; and what is remarkable, to his last breath he persisted in asserting that he never attempted to subvert the laws, or procure more than a toleration and equality of privilege to his Catholic subjects. As there is great reason to believe this assertion to be true, it shows that the delusion was incurable under which the king laboured, by the trust he had put in the knavish doctrines of lawyers and priests and that neither himself, nor his Protestant abettors, could fathom the consequences of that enlarged toleration which he endeavoured to establish.

James abdicated his throne in 1688, and died in 1700.

MACAULAY.

JUNE THE FOURTEENTH.

On Modesty and Assurance.

I KNOW no two words that have been more abused by the different and wrong interpretations put upon them, than these two, Modesty and Assurance ; and shall therefore endeavour to restore them to their true meaning, to prevent the idea of modesty from being confounded with that of sheepishness, and to hinder impudence from passing for assurance.

I define modesty to be the reflection of an ingenuous mind, when a man has committed an action for which he either censures himself, or fancies that he is exposed to the censure of others. For this reason, a man truly modest is as much so when he is alone as in company ; and as subject to a blush in his closet, as when the eyes of multitudes are upon him.

I take assurance to be the faculty of a man's possessing himself, or of saying and doing indifferent things without any uneasiness or emotion in the mind. That which generally gives a man assurance, is a moderate knowledge of the world ; but above all, a mind fixed and determined in itself to do nothing against the rules of honour and decency.

An open and assured behaviour is the natural consequence of such a resolution. A man thus armed, if his words or actions be at any time misrepresented, retires within himself, and from a consciousness of his own integrity, assumes force enough to despise the little censures of ignorance or malice.

Every one ought to encourage in himself the modesty and assurance which I have here mentioned. A man without this assurance, is liable to be made uneasy by the folly or ill-nature of every one he converses with: a man without modesty, is lost to all sense of honour and virtue.

From what has been said, it is plain, that modesty and assurance are both amiable qualities, and may very well meet in the same person. When they are thus mixed and blended together, they compose what we endeavour to express, when we say a modest assurance; by which we understand the just meaning between bashfulness and impudence.

I shall conclude with observing, that, as the same man may be both modest and assured, so it is also possible for the same person to be both impudent and bashful. We have frequent instances of this odd mixture in people of depraved minds and mean education! who, though they are not able to meet a man's eyes, or pronounce a sentence, without confusion, can voluntarily commit the greatest villanies, or the most indecent actions. ADDISON.

JUNE THE FIFTEENTH.

Varieties of the Human Race. (Continued.)

THE Tartars, however widely disseminated, are all accustomed to a wandering life, and dwell in tents. They subsist chiefly on horse-flesh and dried fish; and their usual drink is mare's milk, fermented with ground millet. They have few religious ideas, and no determinate notions of morality or decency of manners. Their chief wealth consists in horses, in the management and care of which they spend much of their time; and they count it no dishonesty to follow robbing as a vocation, provided the theft be exercised on a different tribe from their own.

The men have little hair on their chin: and all shave the head, except a lock of hair on the top; which they suffer to grow to a great length, and form into tresses. The women, though scarcely ever handsome, are studious to braid their hair, and decorate it with bits of copper and similar ornaments.

Different as the Chinese and Japanese are in their manners and customs, they are evidently of Tartar origin. The general turn of features is the same; and the variations in complexion, stature, and observances, may be satisfactorily explained from the principles of climate, food, and political institutions. To the class of original Tartars may be referred the Cochin Chinese, the Siamese, the Tonquinese, and the natives of Aracan, Laos, and Pegu: who all evince a common origin.

The southern Asiatics constitute the *third* variety in the human species. The natives that inhabit the peninsula of India (whose descendants, according to the most accurate and intelligent modern voyagers, appear to have possessed themselves at unknown periods, and by accidental means, of the numerous islands that are scattered throughout the Indian ocean,) are easily distinguished from their more northern neighbours. In stature and features they bear a strong resemblance to Europeans; they are slender and elegantly formed, have long straight black hair, and not unfrequently Roman noses. Their colour, however, according to the diversity of climate, varies from pale olive to black; yet *mogul* signifies, in the oriental language, a white man.

The women are very delicate, but have nearly the same complexion as the men. They early arrive at maturity; and their beauty suffers from the encroachments of age, by the time they have reached their thirtieth year.

Effeminacy, and the want of military qualities, have long characterised the natives of the East; and in consequence they have become slaves to every armed despot who has had the resolution to invade them. Their manners partake of the enervating heat of their climate; they are indolent, submissive, sensual, and averse to the trouble of reflection.

Many of the tribes eat nothing that ever possessed life, and show a laudable reluctance to injure the meanest insect. This arises from their belief in the transmigration of souls; which was the favourite doctrine of Pythagoras, and has for many ages been prevalent among the eastern nations.

The usual food of the Gentoos is rice; their drink the unadulterated stream. They are clothed in silk and cotton, and affect a grave deportment; but this is rather the consequence of a deficiency of animation, than any indication of superior wisdom.

The Persians and Arabians may be referred to the

third class; which, including the inhabitants of the widely dispersed islands in the oriental ocean, constitutes a very large mass of mankind. BUFFON.

JUNE THE SIXTEENTH.

Rise and Progress of the Art of Writing.

NEXT to speech, writing is beyond doubt the most useful art which men possess. It is plainly an improvement upon speech, and therefore must have been subsequent to it in order of time.

Pictures were, undoubtedly, the first attempts towards writing. Imitation is so natural to man, that in all ages, and among all nations, some methods have been obtained of copying or tracing the likeness of sensible objects. Those methods would soon be employed by men for giving some imperfect information to others, at a distance, of what had happened, or for preserving the memory of facts which they sought to record. Thus, to signify that one man had killed another, they drew the figure of a man stretched upon the earth, and of another standing by him with a deadly weapon in his hand. This method, however, must have been extremely imperfect: pictures could no more than delineate external events. They could not describe such qualities as were not visible to the eye, nor convey any idea of the dispositions or words of men.

To supply in some degree this defect, there arose, in process of time, the invention of what are called hieroglyphical characters, which may be considered as the second stage of the art of writing. Hieroglyphics consist in certain symbols which are made to stand for invisible objects. Thus, an eye was the hieroglyphical symbol of knowledge; as a circle was of eternity, which has neither beginning nor end. Egypt was the country where this sort of writing was most studied, and brought into a regular art. In hieroglyphics was conveyed all the boasted wisdom of their priests. According to the properties which they ascribed to animals, or the qualities with which they supposed natural objects to be endowed, they pitched upon them to be the emblems or hieroglyphics of moral objects, and employed them in their writing for that end.

Thus ingratitude was expressed by the figure of a viper;

238 *Preponderance of good Dispositions in Mankind.*

imprudence by a fly; wisdom by an ant; victory by a hawk; a dutiful child by a stork; and a man universally shunned, by an eel, which they supposed to be found in company with no other fish.

Sometimes they joined together two or more of these hieroglyphical characters: as a serpent with a hawk's head; to denote nature, with God presiding over it. But as many of those properties of objects which they assumed for the foundation of their hieroglyphics were merely imaginary, and the allusions drawn from them were forced and ambiguous, they must have expressed very indistinctly the connections and relations of things, and must have been a very imperfect vehicle of knowledge of any kind.

BLAIR.

JUNE THE SEVENTEENTH.

Preponderance of good Dispositions in Mankind.

(A Sunday Lesson.)

GOD made man in his own image, and impressed upon him some characters of the divine original; the principal of which is goodness, though it be not the best preserved; for it is of a tender complexion, and delicate nature; and yet the lovely traces of it are still extant, and still shine, though oft-times faintly, and with a faded lustre.

For goodness is universally approved; justice, equity, truth, sincerity, candour, beneficence, mercy, ever have passed, and ever will pass, for virtues.

There is no man who does not desire that others would exercise them towards him; even they who are deficient in the practice of them, yet pay them the decent respect to think and to speak well of them.

There is no man who does not condemn fraud, malice, cruelty, treachery, ingratitude, injustice, especially when he is made to experience the ill effects of them.

No man ever acted uprightly and honourably who did not feel a calm serenity, a complacency, and satisfaction; none ever pursued wicked courses without some degree of shame and regret, and self-condemnation, and some struggles of expiring virtue.

None, except here and there a brute, ever received great favours and benefits, who had not, out of mere natural ingenuousness, a grateful sense of them; and an intention to testify it, and to make somewhat of a return.

No man, except hardened by a long course of villany, ever saw others in great pain, and want, and sorrow, and distress, and found not a disposition to commiserate and assist them, though he could expect from them no other return than thanks.

History abounds with examples of men who, through natural inclination, through generosity and nobleness of mind, have done great services to their friends, to their country, to strangers, to foreigners, to mankind in general; who, to accomplish these ends, have denied themselves many advantages and pleasures, have encountered many inconveniences, hardships, and dangers, and have even lost their lives, without a view to any worldly recompense, except, perhaps, that they hoped and expected to be honoured, living or dead, by those whom they had obliged, and by judicious and worthy persons. And this surely cannot greatly derogate from their virtuous deeds: it only shows, that, besides a natural sweetness of temper and greatness of soul, they had also some regard to reputation, and a desire to stand fair in the opinion of the public; and to receive, what they justly deserved, the love and the esteem of their fellow-creatures. And why not? since God himself requires our acknowledgments and our affections for his loving kindness.

Thus it hath ever been, and thus it is still, in the world; instances are not wanting of constancy, of friendship, of fidelity, of gratitude, of compassion, of integrity, many of which escape the notice of the public; and are perhaps only observed of God and good angels, being seldom transacted in high life, and under splendid roofs and palaces.

JORTIN

JUNE THE EIGHTEENTH.

Varieties of the Human Race. (Continued.)

THE negroes of Africa form a well-defined and striking variety of our species, which may be called the *fourth*. This sable race is extended over all the southern parts of Africa; and though there are various shades of distinction in point of colour and features, all may be grouped with propriety in the same picture.

As among European nations, we find among the race of negroes also some individuals handsomer than others; all, however, have the black colour, the velvet-smooth skin,

and the soft frizzled hair. Their eyes are generally of a deep hazel, their noses flat and short, their lips thick and prominent, and their teeth of the whiteness of ivory.

Weakened by the heat of their climate, the flesh of the African negroes is flabby, and the whole frame relaxed; while their mental powers in general participate of the imbecility of their bodies. Their genius is extremely limited: they are indolent, and often mischievous; they possess few qualities that can attract regard, yet their feelings are acute, and they are capable of the greatest extremes both of love and hatred: religion, reason, and humanity, therefore, all conspire to induce us to treat them, when in our power, with mildness; or rather, to leave them unmolested in their native enjoyments, however imperfect.

Among these people are sometimes found individuals of a white milky complexion, called Albinos; these, however, no more constitute a distinct race, than persons affected by the small-pox, or bearing the marks of it, among ourselves.

We find the *fifth* variety of the human species among the aboriginal Americans; who are as distinct in colour, as in their place of residence, from the rest of the world. These people (except towards the north among the Esquimaux, where they resemble the Laplanders) are of a red or copper colour; with less variation, however, than might be expected in such a diversity of climate. They all have black straight hair, thin beards, (which, indeed, they take pains to extirpate wholly or in part,) flat noses, high cheek-bones, and small eyes. Various deformities are created under the idea of beauty; and for this purpose they paint the body and face in a manner truly hideous, if judged according to the standard of European taste and manners.

The American Indians are not only more feeble than many of the European nations, but also more pusillanimous, or at least more backward in facing danger: but no sooner do they find it inevitable, than all the courage they possess is excited to the highest possible degree; and they are ready to bear, as well as to inflict, the most cruel tortures that savage ingenuity can invent. Patient in adversity, and familiar with fatigues and hardships, they manifest a stoical apathy in circumstances and accidents which would appear very distressing to an European; but all this is rather, perhaps, the effect of custom and education, than of genuine magnanimity. They appear un-

commonly grave and serious, though devoid of mental application; and, in proportion as they are barbarous to their conquered enemies, they are benevolent and just to those of their own family and tribe. BUFFON.

JUNE THE NINETEENTH.

Of the Division of Labour.

THE effects of the division of labour in the general business of society, will be easily understood by taking an example from a very trifling manufacture; namely, the trade of a pin-maker. This business is divided into a number of branches, of which the greater part are peculiar trades. One man draws out the wire; another straightens it; a third cuts it; a fourth points it; a fifth grinds it at the top for receiving the head; to make the head, requires two or three distinct operations; to put it on is a distinct business; to whiten the pins is another; and it is even a separate trade to put them into the paper.

Pin-making being thus divided into distinct operations, a small manufactory consisting of ten persons, and but indifferently accommodated with the necessary machinery, can produce forty-eight thousand pins in a day. Each person may therefore be considered as making four thousand eight hundred pins in a day; but had they wrought separately and independently, the best workman among them could not have made twenty, and perhaps not one pin in a day.

A great part of the machines made use of in manufactures in which labour is most subdivided, were originally the inventions of common workmen: who, being each of them employed in some very simple operation, naturally turned their thoughts towards finding out easier and readier methods of performing it.

In the first fire-engines, a boy was constantly employed to open and shut alternately the communication between the boiler and the cylinder, accordingly as the piston either ascended or descended. One of these boys, who loved to play with his companions, observed, that by tying a string from the handle of the valve which opened this communication, to another part of the machine, the valve would open and shut without his assistance, and leave him at liberty to divert himself with his play-fellows. One of

the greatest improvements that have been made upon this machine since it was first invented, was in this manner the discovery of a boy who wanted to save his own labour.

ADAM SMITH.

JUNE THE TWENTIETH.

Varieties of the Human Race. (Continued.)

THE *sixth* and last grand division of the human race, and the most elevated in the scale of being, comprehends the Europeans, and those of European origin; among whom may be classed the Georgians, Circassians, and Mingrelians, the natives of Asia Minor, and those of the northern parts of Africa, together with a part of those countries that lie north-west of the Caspian Sea.

The inhabitants of countries so extensive and so widely separated, must be expected to vary a good deal from each other; but in general, there is a striking uniformity in the fairness of their complexions, the beauty and proportion of their limbs, and the extent of their capacity. Arts which are but partially practised, or little known, in other countries, are here brought to the highest perfection: and among the natives of the countries now under consideration, the highest endowments of the understanding, the best virtues of the heart, whatever can improve or adorn human nature, are to be found in a super-eminent degree.

To some one of the classes already enumerated, the people of every country may be referred; and in proportion as nations have been less visited by strangers, or have maintained less intercourse with the rest of mankind, we find their persons and manners more strongly impressed with some of the characteristics above mentioned. On the contrary, in those places where trade has long flourished, or which have been exposed to frequent hostile invasions, the races usually appear blended; and probably fall under no one particular variety, but partake in some respect of all.

It is undeniable, that of all colours by which mankind is diversified, white is not only the most beautiful, but also the most expressive. The fair complexion becomes like a transparent veil to the soul; through which every shade of passion, every change of health, may be seen without the necessity of oral utterance: whereas in the African

black, and the Asiatic olive complexion, the countenance is found a much less distinct index of the mind or the bodily feelings.

Stature wholly depends on climate, food, and other local causes. In wild regions where nourishment is abundant, the human form is developed in its utmost perfection. — Under the equator and towards the poles, it shrinks beneath the due standard; either through the intensity of the heat, or the rigour of the cold. Climate and soil, therefore, have the most powerful effect in expanding or diminishing the size. Even in the same country, the inhabitants of the vales are taller than those of the hills.

As for the form of the face, it probably does not depend altogether upon mere physical causes. Our ideas of beauty and deformity are very different; and by degrees mankind are moulded to that shape, or to those features, which according to our habits of reflection appear handsome and becoming. In this manner casual deformities may in time become natural; and be perpetuated, or even increased, through successive generations. BURTON.

JUNE THE TWENTY-FIRST.

Further Effects of the Division of Labour.

THE woollen coat which covers the day-labourer, coarse and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must join their different arts to complete even this homely production.

How much commerce and navigation, how many ship-builders, sailors, sail-makers, and rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world!

To say nothing of such complicated machines as the ship of the sailor, the mill of the fuller, or even the loom of the weaver, let us consider only what a variety of labour is requisite in order to form that very simple machine, the shears with which the shepherd clips the wool. The miner, the builder of the furnace for smelting the ore, the feller of the timber, the burner of the charcoal to be made use of in the smelting-house, the brick-maker, the

bricklayer, must all join their different arts in order to produce them.

Were we to examine in the same manner all the different parts of his dress and household furniture, the coarse linen shirt he wears, his shoes, the bed he lies on, and all the parts which compose it, the kitchen-grate at which he prepares his victuals, the coals dug for that purpose from the bowels of the earth, and brought to him perhaps by a long sea and long land-carriage, all the other utensils of the kitchen and furniture of his table; the different hands employed in preparing his bread and his beer, the glass-window which lets in the heat and the light, and keeps out the wind and the rain, with all the knowledge and art requisite for preparing that beautiful and happy invention; if we examine all these things, and consider what a variety of labour is employed about each of them, we shall be sensible, that without the assistance and co-operation of many thousands, the very meanest person in a civilised country could not be provided, even according to what we very falsely imagine the easy and simple manner in which he is commonly accommodated.

ADAM SMITH.

JUNE THE TWENTY-SECOND.

Capture of Rome by the Goths in the Year 410.

DURING the long period of six hundred and nineteen years, the metropolis of the Roman empire had never before been violated by the presence of a foreign enemy. The population at this time might amount to twelve hundred thousand men: but the nobles were totally sunk in luxury and effeminacy; and the populace vile and wretched, had been continually recruited by the manumission of slaves, or the influx of foreigners. In such a state of universal degeneracy, the Romans were rather disposed to negotiate than to fight; and therefore received as emperor Attalus, the præfect of the city, who was obtruded on them by Alaric king of the Goths.

Attalus, thus elevated to supreme power, and Alaric having withdrawn, was so intoxicated with his grandeur, that he quarelled with his protector, who soon deposed him from his power.

Rome itself was still the prize in dispute: and to rescue it from pillage, bribes, which only whetted barbaric ava-

rice, and not arms, were resorted to. Honorius was dilatory to fulfil his promises, and Alaric was active to enforce them. During the parley, famine had made dreadful ravages in Rome. War had prevented the cultivation of the lands; and the ports being blocked up, the citizens were reduced to the extremity of distress. Human flesh was publicly sold for food, and mothers are said to have devoured their own offspring.

The citizens, reduced to this dreadful state, would have been incapable of a long defence; but a conspiracy shortened the siege: the Salarian gate was opened at midnight, and the imperial city was abandoned to the fury of the uncivilised tribes of Germany and Scythia. "All the riches of the world," said Alaric to his soldiers on entering the gate, "are here concentrated: to you I abandon them; but I command you to spill the blood of none but the armed, and spare such as take refuge in the churches."

The pillage lasted, according to the most authentic accounts, six days. The Goths fired the town in various places, and many of the most splendid edifices were levelled with the ground. It is not possible to compute the numbers that were massacred, notwithstanding the prohibition of Alaric; nor the multitudes that were reduced from an honourable station and affluent fortune, to the miserable condition of captives and exiles.

Rome, the proud and magnificent capital of the universe, which, for eleven hundred and sixty-three years, had stretched the arms of her power from one end of the earth to another, and had become rich by the spoils of vanquished nations, now fell a prey to a barbarian. The fate which she had inflicted, she now suffered in her turn; and felt herself the calamities which she had caused so many other cities and nations to endure. BURNETT.

JUNE THE TWENTY-THIRD.

On Ship-building and Navigation.

No art or profession has appeared more astonishing and marvellous than that of navigation, in the state in which it is at present. This cannot be made more evident than by taking a retrospective view of the tottering, inartificial craft to which navigation owes its origin: and by comparing them with the noble and majestic edifices now in use, containing a thousand men, with their provisions,

drink; furniture, wearing-apparel, and other necessities for many months, besides a hundred pieces of heavy ordnance, and carrying all this vast apparatus safely, on the wings of the wind, across immense seas.

These majestic floating structures are the result of the ingenuity and united labour of many hundred of hands, and are composed of a great number of well-proportioned pieces of timber, nicely fastened together by means of iron nails and bolts, and rendered so tight with tow and pitch, that no water can penetrate into any part.

To give motion to these enormous machines, lofty pieces of timber called masts, have been fixed upright in them; and sails of linen cloth are placed for the purpose of catching the wind, and receiving its propelling power. It has been requisite also to add vast quantities of cordage and tackling. Yet all these would be insufficient for the perfect government and direction of the vessel, if there were not fastened to the hinder part of it, by means of hinges and hooks, a moveable piece of wood called the rudder, very small in proportion to the whole machine, but the least inclination of which to either side is sufficient to give immediately a different direction to the enormous mass; so that two men may direct and govern this floating town, with the same or with greater ease than a single man can direct a boat.

Even the bellying or vaulted part of the fabric, together with its sharp termination underneath, is proportioned according to the nicest calculations; and the length, width, and strength of the sails and tackling, are all in due proportion to one another, according to certain rules founded upon the principles of the art of ship-building.

A large ship carries at least 2200 tons burden, that is, 4,500,000lb., and at the same time is steered and governed with as much ease as the smallest boat. And yet if such a ship sailed along the coast only, and, like the navigators of old, never lost sight of the shore, we might still look on navigation as an easy business. But to find the shortest way across an ocean, from 4000 to 6000 miles in width, sailing by day or by night, in fair weather or in foul, as well when the sky is overcast, as when it is clear, with no other guide than the compass, or the height of the sun, the moon and stars, with exactness and precision, is the extraordinary and surprising task of him who is skilled in the science of navigation.

A violent storm of wind will make us tremble with fear

in a well-built house, in the midst of a populous city; but the seaman, provided he has a good ship, rides with unshaken courage, amidst the enraged waves, when the whole surface of the ocean presents to the eye an awful scene of immense watery mountains and bottomless precipices.

JUNE THE TWENTY-FOURTH.

Against excessive Love of Praise. (A Sunday Lesson.)

AN excessive desire of praise, joined as it often is to a fear of ridicule or to false notions of honour, hath done inconceivable mischief in the world. It hath kept multitudes from receiving or professing Christianity where other religions prevailed. It hath stirred up the ambitious vanity of princes and generals to wage unjust wars, and to spread ruin and desolation far and wide: nor have there been wanting fools or flatterers, to call it valour and heroism, though it deserves no more applause than a pestilence, a famine, a fire, an inundation, or an earthquake. It hath forced many persons to engage in duels, who, though they knew that it was not consistent with Christianity, and that a thousand bad consequences attended it, yet were weak enough to sacrifice all to the senseless tyrant called Honour. It hath been the cause why many a young person hath pretended to be worse than he really was, hath talked slightly of religion, hath grown negligent of his duty, and so hath made an unhappy progress in all profaneness and immorality; because he fell into bad company, and took his notions of politeness from them, and feared their contempt, and was desirous to pass with them for a man of wit and taste and freedom of thought.

He who hath his reputation principally in view, lies often under temptations to play the hypocrite, and to pretend that he possesses every excellence by which he sees others obtain honour. By this vanity he may be induced to undertake things for which he had no abilities; and to expose himself to inconveniences, to shame and contempt. He puts it into the power of a few spiteful or injudicious persons to deprive him of satisfaction, and then may have leisure to repent that he did not set his heart upon better things. A violent desire to be observed and commended will show itself in his discourse and behaviour, and break

out in little follies and indecencies which others will not be inclined to overlook and excuse.

He who loves flattery must be very fortunate if he finds one to counsel him, and very poor if he finds not one to delude him. He will confine his favours to his flatterers: that is, those who may be secret enemies but cannot be true friends to him; he will shun and fear and dislike those from whom he might receive the most benefit; sincerity and plain dealing will be unacceptable to him, reproof will offend him, and good advice will be thrown away upon him. He will think and speak ill of those who take no notice of him, or who are his equals or superiors in useful qualities or in reputation. The love of praise, when it is discreet and moderate, is always attended with emulation and a strong desire of excelling: and so long as we can stop here, there is no harm done to ourselves or others; but emulation easily and insensibly degenerates into envy and censoriousness.

The world, with all its faults, is seldom so bad as to applaud vices; and St. Paul exhorts Christians to follow not only whatsoever things are right, but whatsoever things are of good report: the love of reputation, therefore, if it be not joined to a bad disposition, will scarcely of itself lead us to immoral actions. Yet the things which the world usually admires and praises most, are not the things in their own nature the most valuable: they are those bright abilities and fair endowments which are exercised about temporal objects; which relate to the present life, and terminate with it. Christian virtues are of a more silent, modest, and retired nature. God and good angels approve them, but the busy world overlooks them. So that he who principally affects popular approbation, runs some danger of living and dying well known to others, and little known to himself; ignorant of the state of his soul, and forgetful of the account which he has to render up to God.

JORTIN

JUNE THE TWENTY-FIFTH.

The Metropolis of China.

PEKIN, the capital of the empire of China, and the usual residence of the emperors, is situated in a very fertile plain, twenty leagues distant from the great wall. It is an oblong square, and is divided into two cities. That

which contains the emperor's palace is called the Tartar city, because the houses were given to the Tartars when the present family came to the throne : and they, refusing to suffer the Chinese to inhabit it, forced them to live without the walls, where they, in a short time, built a new city : which, by being joined to the other, renders the whole of an irregular form, six leagues in compass.

The walls and gates of Peking are of the surprising height of seventy-five feet, so that they hide the whole city : and are so broad, that sentinels are placed upon them on horse-back ; for there are slopes within the city of considerable length by which horsemen may ascend the walls, and in several places there are houses built for the guards. The gates, which are nine in number, are neither embellished with statues nor other carving ; all their beauty consisting in their prodigious height, which, at a distance, gives them a noble appearance. The arches of the gates are built of marble ; and the rest with large bricks, cemented with excellent mortar.

Most of the streets are built in a straight line : the largest are about 120 feet broad, and a league in length. The shops where silks and porcelain are sold, generally take up the whole street, and afford a very agreeable prospect. Each shopkeeper places before his shop, on a small kind of pedestal, a board about twenty feet high ; painted, varnished, and often gilt ; on which are written, in large characters, the names of the commodities which he sells. These being placed on each side of the street, at nearly an equal distance from each other, have a very pretty appearance ; but the houses are poorly built in front, and very low ; most of them having only a ground-floor, and none exceeding one story above it.

Of all the buildings in this great city, the most remarkable is the imperial palace, the grandeur of which does not consist so much in the nobleness and elegance of the architecture, as in the multitude of its buildings, courts, and gardens, all regularly disposed : for within the walls are not only the emperor's house, but a little town, inhabited by the officers of the court, and a multitude of artificers employed and kept by the emperor ; but the houses of the courtiers and artificers are low and ill contrived.

The gardens of this place are large tracts of ground, in which are raised, at proper distances, artificial mountains, from twenty to sixty feet high ; these form a number of small valleys, plentifully watered by canals ; which, uniting, form lakes and meres. Beautiful and magnificent

barks sail on these pieces of water ; and the banks ornamented with ranges of buildings, no two of which are said to have any resemblance to each other : which diversity produces a very pleasing effect.

The population of the Tartar city is stated at one million and a quarter. According to the best information given to the late English embassy, the whole population of Peking is about three millions.

JUNE THE TWENTY-SIXTH.

The Covering of different Animals.

THE covering of animals is, both for its variety and its suitableness to their several natures, as much to be admired as any part of their structure. There are bristles, hair, wool, fur, feathers, quills, prickles, scales : yet in this diversity both of material and form, we cannot change one animal's coat for another, without evidently changing it for the worse ; taking care, however, to remark, that these coverings are intended for protection as well as for warmth.

Man alone can clothe himself ; and this is one of the properties which render him an animal of all the climates and of all seasons. He can adapt the warmth or lightness of his covering to the temperature of his habitation.

What art, however, does for men, nature has in many instances done for those animals which are incapable of art. Their clothing, of its own accord, changes with their necessities. This is particularly the case with that large tribe of quadrupeds which are covered with furs. Every dealer in hare-skins and rabbit-skins knows how much the fur is thickened by the approach of winter. It seems to be a part of the same design of the Power who created all things, that wool in hot countries, most happily for the animal's ease, passes into hair ; while, on the contrary, hair, in the dogs of the polar regions, is turned into wool. To which also may be referred what naturalists have remarked, that bears, wolves, foxes, and hares, which do not take the water, have the fur much thicker on the back than the belly ; whereas in the beaver it is the thickest upon the belly, as also are the feathers in water-fowl. — We know the final cause of all this, and we know, no other.

The covering of birds cannot escape the most vulgar observation: its lightness, its smoothness, its warmth, its singular beauty. The disposition of the feathers all inclined backward, the down about their stem, the overlapping of their tips, their different configuration in different parts, not to mention the variety of their colours; constitute a vestment for the body, so beautiful, and so appropriate to the life which the animal is to lead, as that I think we should have had no conception of any thing equally perfect, if we had never seen it; nor can now imagine any thing more so. PALEY.

JUNE THE TWENTY-SEVENTH.

Rise and Progress of the Art of Writing. (Continued.)

FROM hieroglyphics, writing advanced to simple arbitrary marks which stood for objects, though without any resemblance or analogy to the objects signified. Of this nature was the method of writing practised among the Peruvians. They made use of small cords, of different colours; and by knots upon these, of various sizes, and differently ranged, they contrived signs for giving information, and communicating their thoughts to one another.

Of this kind also are the written characters which are used to this day throughout the great empire of China. The Chinese have no alphabet of letters; but every single character which they use in writing is a mark which stands for some one idea or object. They are said to have seventy thousand of these written characters. To read and write them to perfection, is the study of a whole life; which subjects learning among them to infinite disadvantage, and must have greatly retarded the progress of all science.

We have one instance of this sort of writing in Europe. Our ciphers or arithmetical figures, 1, 2, 3, 4, &c. which we have derived from the Arabians, are significant marks, precisely of the same nature with the Chinese characters. Each figure denotes the number for which it stands: and accordingly on being presented to the eye, is equally understood by all the nations who have agreed in the use of these ciphers, however different the languages of these nations are from one another; and whatever different names they give, in their respective languages, to each numerical cipher.

At length, in different nations, men became sensible of the imperfection and ambiguity of each of the methods here enumerated, for communication with one another. They began to consider, that by employing signs which should stand not directly for things, but for the words used in speech for naming these things, a considerable advantage would be gained.

The first step in this new progress was the invention of an alphabet of syllables, which preceded the invention of an alphabet of letters: till at last some happy genius arose, who, tracing the sounds made by the human voice to their most simple elements, reduced them to a very few vowels and consonants; and taught men how by the combination of these, to put into writing all the different words which they employed in speech. By being reduced to this simplicity, the art of writing was brought to its highest state of perfection: and in this state we now enjoy it in all the countries of Europe. BLAIR.

JUNE THE TWENTY-EIGHT.

The Camel.

OF all animals that man has subjugated to his dominion, the camel is the most abject slave; with incredible patience and submission, he traverses the burning sands of Africa and Arabia, carrying burdens of amazing weight.

The Arabs consider the camel as a gift sent from Heaven, a sacred animal, without whose assistance they could neither subsist, traffic, nor travel. The milk of the camel is their common food. They also eat its flesh, and its hair supplies them with materials for raiment.

In possession of their camels the Arabs want nothing, and have nothing to fear. In one day they can perform a journey of one hundred and fifty miles into the desert, which cuts off every approach from their enemies. By the assistance of his camel, an Arab surmounts all the difficulties of a country which is neither covered with verdure, nor supplied with water.

The tough and spongy feet of the camel are peculiarly adapted to a hot climate, for in the most fatiguing journeys they are never found to crack. The sand seems indeed their element, for as soon as they quit it and touch the mud, they can scarcely keep upright. Their great power of abstaining from drinking, enables them to pass

unwatered tracts of country for seven or eight days, without requiring any liquid. They can discover water by their scent at half a league's distance; and after a long abstinence will hasten towards it, long before their drivers perceive where it lies. Their patience under hunger is such, that they will travel many days fed only with a few dates, or some small balls of barley-meal, or on the miserable thorny plants which they meet with in the deserts.

A large camel will traverse the deserts with a load of a thousand or twelve hundred pounds. When about to be loaded, at the command of the conductor, the animals instantly bend their knees. If overburdened, they give repeated blows with their heads to the person who oppresses them, and sometimes utter lamentable cries.

The Arabs affirm that the camels are so extremely sensible of injustice and ill-treatment, that they will retain the remembrance of an injury till an opportunity offers of gratifying their revenge. Eager to express their resentment, they however no longer retain any anger when once they believe they have satisfied their vengeance. Accordingly when an Arab has excited the rage of a camel, he throws down his garments in the path which the animal is to pass, and disposes them in such a manner that they appear to cover a man sleeping under them. The animal knows the clothes, seizes them in his teeth, shakes them with violence, and tramples on them in a rage. When his anger is thus appeased, he leaves them; and then the owner of them may make his appearance without any fear, and may load and guide the camel as he pleases.

BUFFON.

JUNE THE TWENTY-NINTH.

On Books and Reading.

It is of vast importance for the improvement of knowledge, that a young person should have the most proper books for reading recommended by a judicious friend. In books of importance, I would advise that the preface be read, and a survey taken of the table of contents, (if there be one,) before the first survey of the book. By this means you will not only be better fitted to give the book the first reading, but will be much assisted in the second perusal of it, which should be done with still

greater attention and deliberation. Unless a reader has an uncommon and most retentive memory, I may venture to affirm there is scarcely any book or chapter worth reading once, that is not worthy of a second perusal.

Remember that your business in reading or in conversation, especially on subjects of natural, moral, or divine science, is to consider whether the opinions of the author or speaker are just; and to increase your own knowledge on that subject, by meditation on the heads of their writing or discourse.

Let this therefore be your practice. If a writer does not explain his ideas well, mark the faults, and endeavour to do it better either in the margin of your book, or rather in some papers of your own. For instance: where the author is obscure, enlighten him; where he is too brief, amplify a little, and set his opinions in a fairer view; where he is redundant, mark these paragraphs to be retrenched; where he argues, observe whether his reasons are conclusive; where you suppose he is in a mistake, propose your objections, and correct his sentiments; what he writes that your understanding approves both as just and useful, treasure up in your memory, and count it a part of your intellectual gains.

These methods of reading will cost some labour at first, but the profit will richly compensate the pains; one book read in this manner will more enrich your understanding, than skimming over the mere surface of twenty authors.

WATTS.

JUNE THE THIRTIETH.

The Punishment of Crimes by the Laws of England.

THE law of England includes all capital crimes under High Treason, Petty Treason, and Felony. The first consists in plotting, conspiring, or rising in arms against the sovereign; or in counterfeiting the coin. The traitor is punished by being drawn on a sledge to the place of execution; when after being hanged upon a gallows for some minutes, the body is cut down alive, the heart taken out and exposed to public view, and the entrails burnt; the head is then cut off, and the body quartered; after which it has been usual to fix the head on some conspicuous place. All the criminal's lands and goods are forfeited, his wife loses her dowry, and his children both their estates and nobility.

But though coining of money is adjudged high treason, the criminal is only drawn upon a sledge to the place of execution, and there hanged.

Though the sentence passed upon all traitors is the same, yet, with respect to persons of quality, the punishment is generally altered to beheading: a scaffold is erected for that purpose, on which the criminal, placing his head upon a block, it is struck off with an axe.

The punishment for misprision of high treason (that is, for concealing it, (is imprisonment for life, and the forfeiture of all the offender's goods, and the profits arising from his lands.

Petty Treason is when a child kills his father, a wife her husband, a clergyman his bishop, or a servant his master or mistress. This crime is punished by the offender's being drawn on a sledge to the place of execution, and there hanged. Women guilty of this crime, or of high treason, were sentenced to be burnt alive; but this law has been lately repealed, and the punishment of burning abolished.

Felony includes murder, robbery, and forgery. These are all punished by hanging; only murderers are to be executed within two days after sentence is passed, and then delivered to surgeons in order to be publicly dissected.—Persons guilty of robbery, when there are some alleviating circumstances, are generally condemned to hard labour upon the river; or transported for a term of years, or for life, to Botany Bay, or Port Jackson, both in New South Wales.

Other crimes punished by the laws are,

Manslaughter, which is the unlawful killing of a person without premeditated malice, but with a present intent to kill; as when two, who formerly meant no harm to each other, quarrel, and one kills the other? in this case the criminal is allowed the benefit of clergy, for the first time, and only burnt in the hand.

Chance-medley is the accidental killing of a man without an evil intent; for which the offender is also to be burnt in the hand, unless the offender was doing an unlawful act; which last circumstance makes the punishment death.

Shop-lifting, and receiving goods knowing them to be stolen, are punished with hard labour for a number of years, or burning in the hand.

Perjury is punished with the pillory and imprisonment.

Petty-larceny, or small theft under the value of twelve pence, is punished by whipping.

Libelling, using false weights and measures, and forestalling the market, are commonly punished by imprisonment.

JULY THE FIRST.

Phænomena of the Month of July.

JULY is the hottest month in the year. The direct influence of the sun, indeed, is diminishing; but the earth and air have been so thoroughly heated, that the warmth which they retain, more than compensates for the gradual diminution of the solar rays.

The effects of this weather upon the face of nature soon become manifest. All the flowers of the former month lose their beauty, and the whole plant hastens to decay. Many plants, however, do not begin to flower till July. The lily is one of the principal ornaments of gardens in this month; and with its delicate white flowers gives an agreeable sensation of coolness to the eye.

While the animal creation seem oppressed with languor during this hot season, and either seek the recesses of woods, or resort to pools and streams, to cool their bodies and quench their thirst, the insect tribe are peculiarly active and vigorous. These minute creatures are for the most part annual; being hatched in the spring, and dying at the approach of winter.

The excessive heats of this period of the year cause such an evaporation from the surface of the earth and waters, that, after some continuance of dry weather, large heavy clouds are formed, which at length let fall their collected liquor in extremely copious showers, which frequently beat down the full-grown corn, and sometimes deluge the country with sudden floods. Thunder and lightning generally accompany these summer storms. Lightning is a collection of electric fire drawn from the heated air and earth, and accumulated in the clouds, which, at length overcharged, suddenly let go their contents in the form of broad flashes or fiery darts. These are attracted again by the earth, and often intercepted by buildings, trees, and other elevated objects, which are shattered by the shock. Thunder is the noise occasioned by the explosion, and therefore always follow the

lightning; the sound travelling slower to our ears, than the light to our eyes.

The effects of the great heat on the human body are agreeably allayed, by the various wholesome fruits which Providence offers at this season for the use of man. Those which are now ripe are of all the most cooling and refreshing; as currants, gooseberries, raspberries, strawberries, and cherries. These are no less salutary and useful than the richest products of the warmer climates.

The farmer's chief employment in July is, getting home the various products of the earth. It is the principal hay-month in the northern parts of the kingdom, and the work-people suffer much fatigue from the excessive heat to which they are exposed.

Flax and hemp are pulled in this month. These plants are cultivated in various parts of Europe, more than in England. The stalks of both are full of tough fibres or strings, which, separated and prepared in a particular manner, become fit for spinning into thread. Of flax, linen is made, from the finest cambric to the coarsest canvas. Hemp is chiefly used for coarse cloth, such as strong sheeting, and sacking; but it is sometimes wrought to considerable fineness; it is also twisted into ropes and cables.

The corn-harvest begins in July in the southern parts of the island; but August is the principal harvest month for the whole kingdom. AIKIN.

JULY THE SECOND.

Night. (A Sunday Lesson.)

THE glorious sun is set in the west; the night-dews fall; and the air, which was sultry and oppressive, becomes cool. The flowers of the garden, closing their coloured leaves, fold themselves up and hang their heads on the slender stalk, waiting the return of day.

The birds of the grove have ceased their warblings; they sleep on the boughs of trees, each one with his head behind his wing. The chickens of the farm-yard are gathered under the wing of the hen, and are at rest; the hen, their parent, is at rest also. There is no murmur of bees around the hive, or amongst the honeyed woodbines: they have finished their work, and now lie close in their waxen cells.

The sheep rest in the fields upon their soft fleeces, and their loud bleating no longer resounds from the hills. There is no sound of the voice of the busy multitude, or of children at play, or the trampling of feet, and of crowds hurrying to and fro. The smith's hammer is not heard upon the anvil; nor the harsh saw of the carpenter. All men are stretched upon their quiet beds; and the infant reposes in peace and security on the bosom of its mother. Darkness is spread over the skies, and darkness is upon the ground: every eye is shut, and every hand is still.

Who takes care of all people when they are sunk in sleep; when they cannot defend themselves, nor see if danger approaches? There is an eye that never sleeps; there is an eye that sees in the darkness of night as well as in the brightest sunshine. When there is no light of the sun, nor of the moon; when there is no lamp in the house, nor any star twinkling through the thick clouds; that eye sees every where, in all places, and watches continually over all the families of the earth.

The eye that sleeps not is God's; his hand is always stretched out over us. He made sleep to refresh us when we are weary; he made night that we might sleep in quiet. As the affectionate mother stills every little noise, that her infant be not disturbed: as she draws the curtains around its bed, and shuts out the light from its tender eyes; so God draws the curtains of darkness around us; so he makes all things to be hushed and still, that his large family may sleep in peace.

When the darkness has passed away, and the beams of the morning sun strike through your eye-lids, begin the day with praising God, who has taken care of you through the night. Flowers, when you open again, spread your leaves, and smell sweet to his praise. Birds, when you awake, warble your thanks amongst the green boughs! Let his praise be in our hearts when we lie down; let his praise be on our lips when we awake.

BARBAULD.

JULY THE THIRD.

Of the English Universities.

THE two universities of Oxford and Cambridge have produced more learned men than any others in Europe.

Their magnificent buildings, which, in splendour and architecture, rival the most superb royal edifices, the rich endowments, and the liberal ease and tranquillity enjoyed by those who inhabit them, surpass all the ideas which foreigners who visit them conceive of literary societies. So respectable are they in their foundations, that each university sends two members to the British parliament, and their chancellors and officers have a civil jurisdiction over their students, the better to secure their independency. Their colleges, in revenues and buildings, exceed those of many other universities.

In Oxford there are twenty colleges and five halls: the former are very liberally endowed, but in the latter the students chiefly maintain themselves. This university is of great antiquity: it is supposed to have been a considerable place even in the time of the Romans; and Camden says, that wise antiquity did, even in the British age, consecrate this place to the Muses. It is said to have been styled an university before the time of king Alfred; and the best historians admit, that this most excellent prince was only a restorer of learning here. Alfred built three colleges at Oxford; one for divinity, another for philosophy, and a third for grammar. The present colleges are, however, of a more recent date, none being older than the 13th century. The number of officers, fellows, and students, maintained at present by this university, is about 1000; and the number of such scholars as live at their own charge, usually about 2000.

The university of Cambridge consists of twelve colleges, and four halls; but though they are distinguished by different names, the privileges of the colleges and halls are in every respect the same. The number of fellows at this university is 400, and that of scholars 666, with 236 officers and servants of various kinds. All these are maintained on the foundation. They are not, however, all the students here: there are others called pensioners; the greater and the less. The greater pensioners are sons of the nobility, and of gentlemen of large fortunes; and are called fellow-commoners, because, though they are scholars, they dine with the fellows. The lesser pensioners dine with the scholars, who are on the foundation, but live at their own expense. There are also a considerable number of poor scholars, called sizars, who wait upon the fellows and scholars, and pensioners of both ranks, by whom they are in a great degree maintained; but the number of pensioners and sizars cannot be ascertained

with any accuracy, as it is in a state of perpetual fluctuation.

The senate-house at Cambridge is a most elegant edifice, executed entirely in the Corinthian order, and is said to have cost sixteen thousand pounds. Trinity college library is also a very magnificent structure; and in Corpus Christi college library is a valuable collection of ancient manuscripts, which were preserved at the dissolution of the monasteries, and given to this college by archbishop Parker.

JULY THE FOURTH.

Labour and Rest : an Allegory.

IN the early ages of the world, mankind was happy in the enjoyment of continual pleasure and constant plenty under the protection of Rest, a gentle divinity, who required of her worshippers neither altars nor sacrifices; and whose rites were only performed by prostrations upon turfs of flowers in shades of jasmine and myrtle, or by dances on the banks of rivers flowing with milk and nectar.

Under this easy government the first generations breathed the fragrance of perpetual spring, ate the fruits which without culture fell into their hands, and slept under bowers arched by nature, with the birds singing over their heads, and the beasts sporting about them.

But by degrees each, though there was more than enough for all, was desirous of appropriating part to himself. Then entered Violence, and Fraud, and Theft, and Rapine. Soon after Pride and Envy broke into the world, and brought with them a new standard of wealth; for men, who till then thought themselves rich when they wanted nothing, now rated their demands, not by the calls of nature, but by the plenty of others; and began to consider themselves as poor, when they beheld their own possessions exceeded by those of their neighbours.

Amidst the prevalence of this corruption, the state of the earth was changed; the year was divided into seasons; part of the ground became barren, and the rest yielded only berries, acorns, and herbs. The summer indeed furnished a coarse and inelegant sufficiency, but winter was without any relief: famine, with a thousand

diseases, which the inclemency of the air invited into the upper regions, made havock among the men, and there appeared to be danger lest they should be destroyed before they were reformed.

To oppose the devastations of Famine, who scattered the ground every where with carcases, Labour came down upon the earth. Labour was the son of Necessity, the nurseling of Hope, and the pupil of Art; he had the strength of his mother, the spirit of his nurse, and the dexterity of his governess. His face was wrinkled with the wind, and swarthy with the sun; he had implements of husbandry in one hand, with which he turned up the earth; in the other he had the tools of architecture, and raised walls and towers at his pleasure.

He called out with a rough voice, Mortals! see here the power to whom you are consigned, and from whom you are to hope for all your pleasures, and all your safety. You have long languished under the dominion of Rest, an impotent and deceitful goddess, who can neither protect nor relieve, but resigns you to the first attacks of either Famine or Disease, and suffers her shades to be invaded by every enemy, and destroyed by every accident. Wake, therefore, to the call of Labour. I will teach you to remedy the sterility of the earth, and the severity of the sky; I will compel summer to find provisions for the winter. I will force the waters to give you their fish, the air its fowls, and the forest its beasts; I will teach you to pierce the bowels of the earth; and bring out from the caverns of the mountains, metals which shall give strength to your hands, and security to your bodies, by which you may be covered from the assaults of the fiercest beasts, and with which you shall fell the oak, and divide rocks, and subject all Nature to your use and pleasure.

Encouraged by this magnificent invitation, the inhabitants of the globe considered Labour as their only friend, and hasted to his command. He led them out to the fields and mountains, and showed them how to open mines, to level hills, to drain marshes, and change the course of rivers. The face of things was immediately transformed; the land was covered with towns and villages, encompassed with fields of corn, and plantations of fruit-trees; and nothing was seen but heaps of grain, and baskets of fruit, full tables, and crowded storehouses.

JULY THE FIFTH.

Labour and Rest. (Continued.)

LABOUR and his followers added almost every hour new acquisitions to their conquests, and saw Famine gradually dispossessed of his dominions; till at last, amidst their jollity and triumphs, they were depressed and amazed by the approach of Lassitude, who was known by her sunk eyes and dejected countenance. She came forward trembling and groaning: at every groan the hearts of all those that beheld her lost their courage, their nerves slackened, their hands shook, and the instruments of labour fell from their grasp.

Rest now took leave of the groves and valleys which she had hitherto inhabited, and entered into palaces, reposed herself in alcoves, and slumbered away the winter upon beds of down, and the summer in artificial grottoes, with cascades playing before her. There was indeed always something wanting to complete her felicity, and she could never lull her returning fugitives to that serenity which they knew before their engagements with Labour: nor was her dominion entirely without controul; for she was obliged to share it with Luxury, though she always looked upon her as a false friend, by whom her influence was in reality destroyed, while it seemed to be promoted.

The two soft associates, however, reigned for some time without visible disagreement, till at last Luxury betrayed her charge, and let in Disease, to seize upon her worshippers. Rest then flew away, and left the place to the usurpers; who employed all their arts to fortify themselves in their possession, and to strengthen the interest of each other.

Thus Rest and Labour equally perceived their reign of short duration and uncertain tenure, and their empire liable to inroads from those who were alike enemies to both. They each found their subjects unfaithful, and ready to desert them upon every opportunity. Labour saw the riches which he had given always carried away as an offering to Rest, and Rest found her votaries in every exigence flying from her to beg help of Labour. They therefore at last determined upon an interview, in which they agreed to divide the world between them, and govern it alternately, allotting the dominion of the day to one, and that of the night to the other, and promised

to guard the frontiers of each other; so that whichever hostilities were attempted, Satiety should be intercepted by Labour, and Lassitude expelled by Rest.

Thus the ancient quarrel was appeased: Rest united to Labour gave birth to Health, a benevolent goddess, who consolidated the union of her parents, and contributed to the regular vicissitudes of their reign, by dispensing her gifts to those only who shared their lives in just proportions between Rest and Labour.

JOHNSON.

JULY THE SIXTH.

Cook's first Voyage round the World.

At the close of the year 1767, it was resolved by the Royal Society, that it would be proper to send persons into some parts of the South Sea, to observe a transit of the planet Venus over the sun's disk, which, according to astronomical calculation, would happen in the year 1769: and that the islands called Marquesas de Mendosa, or those of Rotterdam or Amsterdam, were the properest places then known for making such observations.

In consequence of these resolutions, it was recommended to the king, in a memorial from the society, dated February, 1768, that he would be pleased to order such an observation to be made: upon which his majesty signified to the lords of the admiralty his pleasure that a ship should be provided to carry such observers as the society should think fit, to the South Seas; and accordingly a bark of three hundred and seventy tons was prepared for that purpose. It was named the Endeavour, and commanded by Captain James Cook; who was soon after, by the Royal Society, appointed, with Mr. Charles Green, a gentleman who had long been assistant to Dr. Bradley at the royal observatory at Greenwich, to observe the transit.

But while this vessel was getting ready for her expedition, Captain Wallis returned: and it having been recommended to him by lord Morton, when he went out, to fix on a proper place for this astronomical observation, he, by letter, dated on board the Dolphin, the 18th of May, 1768, the day before he landed at Hastings, mentioned Port Royal harbour, in the island of Otaheite: the Royal Society, therefore, by letter, dated the beginning of June, in answer to an application from the admiralty, to be in-

formed whither they would have their observers sent, made choice of that place.

Captain Cook set sail from Plymouth, in the Endeavour, on the 26th of August, 1768. He was accompanied in his voyage by Joseph Banks, Esq. and Dr. Solander. They made no discovery till they got within the tropics, where they fell in with Lagoon Island, two groups, Bird Island, and Chain Island; and they arrived at Otaheite on the 13th of April, 1769. During their stay at that island, they had the opportunity of making very accurate inquiries relative to its produce and inhabitants; and on the 4th of June, the whole passage of the planet Venus over the sun's disk was observed by them with great advantage. The result of their observations may be found in the Philosophical Transactions.

After his departure from Otaheite, Captain Cook discovered and visited the Society Islands and Oheteroa, and thence proceeded to the south till he arrived in the latitude of 40 degrees 22 minutes, longitude 147 degrees 29 minutes west, and afterwards made an accurate survey of the coast of New Zealand. In November he discovered a chain of islands, which he called Barrier Islands. He afterwards proceeded to New Holland, and thence to New Guinea; and in September, 1770, arrived at the island of Savu, whence he proceeded to Batavia, and thence round the Cape of Good Hope to England, where he arrived on the 12th of June 1771.

JULY THE SEVENTH.

Cook's second Voyage round the World.

Soon after Captain Cook's return home in the Endeavour, it was resolved to equip two ships, in order to make further discoveries in the southern hemisphere. Accordingly the Resolution and the Adventure were appointed for that purpose; the first was commanded by Captain Cook, and the latter by Captain Tobias Furneaux.

They sailed from Plymouth Sound on the 13th of July, 1772; and on the 29th of the same month arrived at the island of Madeira, whence they proceeded to the Cape of Good Hope; and in February, 1773, arrived at New Zealand, having sought in vain for a southern continent. In that month the Resolution and the Adventure separated, in consequence of a thick fog; but they joined

company again in Queen Charlotte's Sound, on the 18th of May following. In August they arrived at Otaheite; and in September they discovered Harvey's Island. On the 2d of October they came to Middleburgh, one of the Friendly Islands; and about the close of that month the Resolution and the Adventure were separated, and did not join company any more.

Captain Cook, however, proceeded in the Resolution, in order to make discoveries in the southern polar regions, but was stopped in his progress by the ice, in the latitude of 71 degrees 10 minutes south, longitude 100 degrees 54 minutes west. He then proceeded to Easter Island where he arrived in March, 1774, as he did also in the same month at the Marquesas Islands. He afterwards discovered four islands, which he named Palliser's Islands; and again steered for Otaheite, where he arrived on the 22d of April, and made some stay, and also visited the neighbouring isles. In August he came to the New Hebrides, some of which were first discovered by him. After leaving these islands, he steered to the southward a few days, and discovered New Caledonia.

Having surveyed the south-west coast of this island, Captain Cook steered again for New Zealand in order to refresh his crew, and put his ship into a condition to encounter the danger attending the navigation in the high southern latitudes. Directing his course to the south and east, after leaving New Zealand, till he arrived in the latitude of 55 degrees 6 minutes south, longitude 138 degrees 56 minutes west, without meeting with any continent, Captain Cook gave up all hopes of discovering one in this ocean; and therefore came to a resolution to steer directly for the west entrance of the straits of Magellan, with a view of coasting and surveying the uttermost or south side of Terra del Fuego.

Keeping accordingly in about the latitude of 53 or 55, and steering nearly east, he arrived off the western mouth of the straits of Magellan, without meeting with any thing remarkable in his new route. In January, 1775, he discovered a large and dreary island, to which he gave the name of South Georgia. He afterwards discovered various capes and elevated snow-clad coasts, to the most southern part of which he gave the name of the Southern Thule, as being the nearest land to that pole which has yet been discovered. In February, he discovered Sandwich Land, and several islands covered with snow. He

then proceeded round the Cape of Good Hope to England, where he arrived on the 30th of July, 1775.

Captain Furneaux had returned to England in the *Adventure* a year before, having proceeded home round the Cape of Good Hope without making any remarkable discovery. Ten of his men, a boat's crew, had been murdered and eaten by some of the savages of New Zealand : so that this voyage afforded a melancholy proof that cannibals really exist ; and indeed, in the course of these voyages of discovery, other evidence appeared of this fact.

As to Captain Cook, in the course of his voyage in the *Resolution*, he had made the circuit of the southern ocean, in a high latitude, and had traversed it in such a manner as to leave not the least room for the possibility of there being a southern continent, unless near the pole, and out of the reach of navigation.

JULY THE EIGHTH

The Dispensations of Providence to Man.

(A Sunday Lesson.)

THE beauties of Nature bear witness to the existence of God, and the miseries of man confirm the truths of religion. There exists not a single animal that is not lodged, clothed, fed, by the hand of Nature, without care, and almost without labour. Man alone, from his birth upward, is overwhelmed with calamity. First, he is born naked, and possessed of so little instinct, that if the mother who bore him were not to rear him for several years, he would perish of hunger, of cold, or of heat.

Thus Providence interposes for the relief of man, supplying his wants in a thousand extraordinary ways. What would have become of him in the earliest ages, had he been abandoned to his own reason, still unaided by experience ? Where found he corn, which at this day constitutes a principal part of the food of so many nations ? Who taught him agriculture, an art so simple, that the most stupid of mankind is capable of learning it ; and yet so sublime, that the most intelligent of animals never can pretend to practise it ? There is scarcely an animal which supports not its life by vegetables, which has not daily experience of their reproduction, and which does not employ, in quest of those that suit them, many more com-

binations than would have been necessary for resowing them.

If Providence had abandoned man to himself, on proceeding from the hands of the Creator, what would have become of him? Who could have subjected to his authority so many animals which stood in no need of him, which surpassed him in cunning, in speed, in strength; unless the hand which, notwithstanding his fall, destined him still to empire, had humbled their heads in obedience to his will? The preservation, the enjoyments, and the empire of man demonstrate, that at all times a beneficent God has been the friend and protector of human life.

ST. PIERRE.

JULY THE NINTH.

Account of Mahomet.

MAHOMET sprung from the tribe of Koreish, was the only son of Abdallah and Amina. He was born at Mecca, four years after the death of Justinian; and becoming an orphan in his infancy, his uncle, Abu Taleb, assumed the office of his guardian. In his twenty-fifth year he entered into the service of Cadijah, a rich widow of Mecca, who bestowed on him her hand and fortune. By this alliance he became respectable, and continued in the practice of domestic virtue, till, in the fortieth year of his age, he assumed the title of a prophet and proclaimed the religion of the Koran.

To the advantages of a good person, Mahomet added a capacious mind, and a retentive memory, an easy social wit, and a lively imagination. He was fluent in speech when occasion required, but most frequently adhered to the grave and ceremonious silence of his country. Yet, with all his natural accomplishments, he had never been instructed in the arts of reading or writing; nor had he seen more of the world than what could be gleaned at the fairs of Bosra and Damascus. From his earliest youth, however, he had been addicted to religious contemplation, and each year, during the month of Ramadan, he withdrew to the cave of Hera, three miles from Mecca: and at length delivered, under the name of Islam, that faith, which is compounded of an eternal truth and a daring fiction, "That there is only one God, and that Mahomet is his prophet." Yet Adam, Noah, Abraham, Moses, and

Christ, are allowed to have made successive revelations to mankind; but the Koran is held up as the last and final dispensation of the Almighty.

The first proselytes of Mahomet were Cadijah his wife, Zeid his servant, Ali his pupil, and Abubeker his friend. In the silent labours of three years, the number was increased to fourteen; and in the fourth year he publicly assumed the prophetic office. But his incredulous countrymen in general rejecting his mission, a conspiracy was formed against him, the object of which was to take him off by assassination; but Mahomet, having timely notice of the design, contrived to escape to Medina, which has fixed the memorable era of the Hegira or Flight, in the year of Christ 622.

We cannot in this place follow Mahomet through the future revolutions of his extraordinary fortune. Suffice it to say, that he was no less distinguished as a great and successful warrior, than as the founder of a new religion; and that the sword made more converts to the prophet, than the pretended authority under which he acted. In a word, he became the powerful head of a large empire, which has since extended itself over the most flourishing regions of Europe, Asia, and Africa.

The strength of Mahomet, till the age of sixty-three, was equal to the fatigues of his station; but during the last four years he believed he had been poisoned. A fever of fourteen days deprived him of the use of his reason: conscious of his danger, he beheld with firmness the approach of death; he enfranchised his slaves; directed the order of his funeral; and moderated the lamentations of his friends. He reclined his head on the lap of Ayesha, the most beloved of his wives; and, raising his eyes, exclaimed, O God! pardon my sins—yes, I come among my fellow-citizens on high: and peaceably breathed his last on a carpet on the floor. He was interred on the same spot on which he expired; and the tomb of the prophet at Medina vies, in the opinion of the pilgrim, with the sanctity of the temple at Mecca. BURNET.

JULY THE TENTH.

The Discovery of America by Columbus.

ARDS the close of the fifteenth century, Venice and were the only powers in Europe which owed their

support to commerce. An interference of interests inspired a mutual rivalry; but in traffic Venice was much superior. She engrossed the whole commerce of India, then, and indeed always, the most valuable in the world, but hitherto entirely carried on through the inland parts of Asia, or by the way of Egypt and the Red Sea.

In this state of affairs, Christoval, or Christopher, Colon, more generally known by his latinised name Columbus, a native of Genoa, whose knowledge of the true figure of the earth was much superior to the general notions of the age in which he lived, conceived a project of sailing to the Indies by a bold and unknown route, and of opening to his country a new source of opulence and power. But this proposal of sailing westward to the Indies was rejected by the Genoese as chimerical, and the principles on which it was founded were condemned as absurd.

Stung with disappointment and indignation, Columbus retired from his country, and laid his scheme before the court of France; where his reception was still more mortifying, and where, according to the practice of that people, he was laughed at and ridiculed.

Henry VII. of England was his next resort; but the cautious politics of that prince were the most opposite imaginable to a great but uncertain design.

Spain was now his only resource; and there, after eight years' attendance, he succeeded, chiefly through the superior intelligence of the queen Isabella.

Columbus set sail in the year 1492, with a fleet of three ships, upon the most adventurous attempt ever undertaken by man, and in the fate of which the inhabitants of two worlds were interested. In this voyage he had a thousand difficulties to contend with: the most formidable was the variation of the compass, then first observed, and which seemed to threaten that the laws of nature were altered in an unknown ocean, and that the only guide he had left was ready to forsake him. His sailors, always discontented, now broke out into open mutiny, threatening to throw him overboard, and insisted on their return. But the firmness of the commander, and the discovery of land, after a voyage of thirty-three days, put an end to the commotion.

Columbus first landed on Cat Island, one of the Bahamas; but here, to his surprise and sorrow he discovered, from the poverty of the inhabitants, that these could not be the Indies he was in quest of. In steering southward,

however, he found the island which he called Hispaniola, or St. Domingo, abounding in all the necessities of life, inhabited by a humane and hospitable people, and what was of still greater consequence, as it insured his favourable reception at home, promising, from some samples he received, considerable quantities of gold. This island, therefore, he proposed to make the centre of his discoveries ; and having left upon it a few of his companions as the ground-work of a colony, returned to Spain to secure the necessary reinforcements.

JULY THE ELEVENTH.

A Lesson to Pride ; or, The Basket-maker.

IN the midst of that vast ocean, commonly called the South Sea, lie the *Islands of Solomon*. In the centre of these lies one not only distant from the rest, which are widely scattered round it, but also larger beyond proportion. An ancestor of the prince who now reigns absolute in this central island, has, through a long descent of ages, entailed the name of *Solomon's Islands* on the whole, by the effect of that wisdom wherewith he improved the minds and polished the manners of his people.

A descendant of one of the great men of this happy island, rapidly increasing in wealth and power, became so inflated with prosperity, as to despise the good qualities which had originally ennobled his family ; and thought of nothing but how to support and distinguish his dignity by the pride of an ignorant mind, and a disposition devoted to pleasure. He had a house on the sea-side, where he spent great part of his time in hunting and fishing ; but sometimes found himself embarrassed in the pursuit of those important diversions, by means of a long slip of marsh lands, overgrown with high reeds, that lay between his house and the sea.

Resolving, at length, that it became not a man of his quality to submit to a restraint in his pleasures, for the ease and convenience of an obstinate mechanic ; and having often endeavoured in vain to buy out the owner, who was an honest poor basket-maker, and whose livelihood entirely depended on working up the flags of those reeds in a manner peculiar to himself ; the gentleman took advantage of a very high wind, and commanded his servants to burn down the barrier.

The basket-maker, who saw himself utterly undone, complained of the oppression, in terms more suited to his sense of the injury, than to the respect due to the rank of the offender: and the reward this imprudence procured him was blows, reproaches, and every kind of insult and indignity.

There was but one way to a remedy, and that was by going to the capital with the marks of his hard usage upon him: he threw himself at the feet of the king, and procured a summons for his oppressor's appearance;—who, confessing the charge, proceeded to justify his behaviour by the poor man's unmindfulness of the submission due from the vulgar to gentlemen of rank and distinction.

But pray, replied the king, what distinction of rank had the grandfather of your father, when, being a cleaver of wood in the palace of my ancestors, he was raised from among those vulgar you speak of with such contempt, in reward for an instance he gave of courage and loyalty in defence of his master? Yet his distinction was nobler than yours: it was the distinction of worth, not of fortune. I am sorry that I have a gentleman in my dominions base enough to be ignorant, that ease and distinction of fortune were bestowed on him but to this end,—that being at rest from all cares of providing for himself, he might apply his heart, head, and hand, for the public advantage.

JULY THE TWELFTH.

A Lesson to Pride; or, The Basket-maker. (Continued.)

HERE the king, discontinuing his speech, fixed an eye of indignation on the sullen resentment of mien which he observed in the haughty offender; who muttered a dislike of the encouragement such maxims must give to the commonalty, who, he said, were beneath the regard and consideration of men who were born to be honoured.

Where a right judgment is wanting, replied the king with a smile of disdain, men must learn their defects in the pain of their sufferings. Yanhuma, added he, turning to a captain of the galley, strip the injured and the injurer; convey them to one of the most barbarous and remote of the islands, set them ashore in the night, and leave them both to their fortune.

The place in which the gentleman and the basket-maker were landed was a marsh. Under cover of the flags the

gentleman was in hopes of concealing himself, and escaping from his companion, whom he thought it a disgrace to be near, even in this desolate situation; but the lights in the galley having given an alarm to the savages, a considerable body of them came down, and discovered in the morning the two strangers in their hiding-place. Setting up a dismal yell, they surrounded them; and advancing nearer and nearer, raised their formidable clubs in a threatening manner, and seemed determined to dispatch them without mercy.

Here the gentleman first began to discover that the superiority of his nature was imaginary; for between the consciousness of shame and cold, under the nakedness he had never been used to, his terror of the savages, and his total ignorance of any art whereby to soften or divert their asperity, he crept behind the poor sharer of his calamity, and with an unmanly and apprehensive mien, gave up the post of honour, and made a leader of the very man whom, an hour before, he had thought it a disgrace to consider even as a companion in misfortune.

The basket-maker, on the contrary, to whom the poverty of his condition had made nakedness habitual; to whom a life of pain and mortification represented death as not dreadful; and whose remembrance of his skill in mechanical arts, of which these savages were entirely ignorant, gave him hopes of becoming safe by demonstrating that he could be useful; moved with a bolder and more open freedom, and having plucked a handful of the flags, sat down on the ground, and, making signs that he would show them something worthy of their attention, fell to work with smiles and noddings; while the savages drew near, and gazed with eager expectation of the consequence.

JULY THE THIRTEENTH.

A Lesson to Pride; or, The Basket-maker. (Concluded.)

It was not long before he had wreathed a kind of coronet of pretty workmanship; and rising with respect and fearfulness, approached the savage who appeared the chief, and placed it gently on his head; whose figure under this new ornament so charmed and delighted his followers, that they all threw down their clubs, and formed a dance of welcome and congratulation round the author of so valued a favour.

There was not one of the savages who now showed not the marks of his impatience to be made as fine as the captain; and the poor basket-maker had his hands full of employment; and the savages presently observing one captive stand entirely idle, while the other was so busy in their service, seized their clubs, and began to lay on arguments in behalf of natural justice.

The basket-maker's pity now effaced the remembrance of his wrongs and sufferings; he rose and rescued his oppressor, by making signs that he was ignorant of the art, but might, if they thought fit, be usefully employed, in fetching flags for his supply as fast as he should want them.

This proposal luckily fell in with a desire which the savages expressed to keep themselves at leisure, that they might crowd round and mark the progress of a work they took such pleasure in. They left the gentleman therefore to do his duty in the basket-maker's service; and considered him from that time forward as one who was greatly inferior to their benefactor.

Men, women, and children, from all corners of the island, came in multitudes for coronets; and setting the gentleman to work to gather boughs and poles, they constructed a fine hut to lodge the basket-maker in; and brought down daily from the country such provisions as they lived upon themselves, taking care to offer the gentleman nothing till his master had done eating.

Three months' experience and reflection in this mortified condition, gave a new and just turn to the gentleman's ideas; insomuch that, lying weeping and awake one night, he thus confessed his sentiments to the basket-maker:—I have indeed been to blame, and wanted judgment to distinguish between accident and excellence. When I should have estimated nature, I looked but to vanity. The preference which fortune gives, is empty and imaginary; and I perceive too late, that only useful qualities are naturally honourable. I blush when I compare my malice and injustice with your kindness and humanity. But if the gods should please to call me to a repossession of my rank and happiness, I would divide all with you in atonement for my justly punished arrogance.

He promised, and performed his promise; for the king soon after sent the captain, who had landed them, with presents to the savages, and orders to bring them both back again. And it continues to this day a custom in that island, to degrade all gentlemen who cannot give a

better reason for their pride, than that they were born to do nothing: and the word for this due punishment is, *Send him to the Basket-maker.*

JULY THE FOURTEENTH

Cook's third Voyage round the World.

BESIDES the voyages of discovery already mentioned, another voyage was performed by Captain Cook and Captain Clerke, in the *Resolution* and *Discovery*, during the years 1776, 1777, 1778, and 1779, in search of a north-west passage between the continents of Asia and America.

After they arrived at the Cape of Good Hope, they proceeded thence to New Holland. In their course they discovered two islands, which Captain Cook called Prince Edward's Isles. The largest, about fifteen leagues in circuit, is in latitude 46-53 south, longitude 37-46; the other, about nine leagues in circuit, in latitude 46-40, and longitude 38-8 east; both barren, and almost covered with snow. From New Holland they sailed to New Zealand, and afterwards visited the Friendly and the Society Isles.

In January, 1777, they arrived at the Sandwich Isles, which are twelve in number, and are situated between 22 degrees 15 minutes, and 18 degrees 53 minutes north latitude. The air of these islands is in general salubrious, and many of the vegetable productions are the same with those of the Society and Friendly Isles. The inhabitants are of a middle size, stout and well made, and their complexion in general a brown olive.

On the 7th of February, being nearly in latitude 44 degrees 33 minutes north, and longitude 235 degrees 36 minutes east, they saw part of the American continent, bearing north-east. They afterwards discovered King George's Sound, which is situated on the north-west coast of America, and is extensive: that part of it where the ships under the command of Captain Cook anchored, is in latitude 49 degrees 36 minutes north, and longitude 233 degrees 23 minutes east. The whole sound is surrounded by high land, which in some places appears very much broken and rugged, and is in general covered with wood to the very top. They found the inhabitants here rather below the middle size, and their complexions approaching to a copper colour.

On the 12th of May they discovered Sandwich Sound, in latitude 59 degrees 54 minutes north. The harbour, in which the ships anchored, appeared to be almost surrounded with high land, which was covered with snow; and here they were visited by some of the Americans in their canoes. They afterwards proceeded to Unalashka; and after their departure from that island, still continued to trace the American coast, till they discovered the strait which separates it from the continent of Asia. Here both the hemispheres presented to the view a naked and flat country, without any defence, and the sea between them not very deep.

They passed the strait, and arrived on the 20th of August, 1778, in latitude 70 degrees 54 minutes, longitude 194 degrees 55 minutes, where they found themselves almost surrounded with ice; and the further they proceeded to the eastward, the closer the ice became compacted. They continued labouring among the ice till the 25th, when a storm came on, which made it dangerous for them to proceed: a consultation was therefore held on board the *Resolution*, as soon as the violence of the gale abated; when it was resolved, that as this passage was impracticable for any useful purpose of navigation, which was the great object of the voyage, it should be prosecuted no further; and especially on account of the condition the ships were in, the approach of winter, and their great distance from any known place of refreshment. The voyage indeed afforded sufficient evidence, that no practicable passage exists between the Atlantic and Pacific Oceans towards the north; and this voyage also ascertained the western boundaries of the great continent of America.

On their return, it unfortunately happened that the celebrated and able navigator, Captain Cook, was killed in an affray with the natives on the island of *Owhyhee*, one of the Sandwich Isles, on the 14th of February, 1779; not so much by his own rashness, as through the inadvertence and neglect of some of his own people. His death was universally regretted, not only in Great Britain, but also in other parts of Europe, by those to whom his merits and public services were known. In his last voyage he had explored the coast of America, from 42 degrees 27 minutes to 70 degrees 40 minutes 57 seconds north.

After the death of Captain Cook, the command devolved on Captain Clerke, who died at sea on his return to the southward. on the 22d day of August, 1779. The

two ships returned home by the Cape of Good Hope, and on the 5th of October, 1780, anchored at the Nore.

JULY THE FIFTEENTH.

A Father's Advice to his Son. (A Sunday Lesson.)

FIRST, my beloved child, worship and adore God ; think of him magnificently, speak of him reverently, magnify his providence, adore his power, frequent his service, and pray to him constantly.

Next to this, love your neighbour, which is all mankind, with such tenderness and affection as you love yourself ; think how God loves all mankind, how merciful he is to them, how tender he is of them, how carefully he preserves them ; and then strive to love your fellow-creatures as God loves them.

Let truth and sincerity be the only ornament of your language ; and study how to think of all things as they deserve.

Let your dress be sober, clean, and modest. In your meat and drink, observe the rules of Christian temperance and sobriety ; consider your body as only the servant of your soul ; and only nourish the one, so as it may best perform a humble and obedient service to the other.

Let every day be a day of humility ; relieve the wants, and rejoice in the prosperity of your fellow-creatures ; compassionate their distress, overlook their unkindness, and forgive their malice.

The time of practising these precepts, my child, will soon be over with you ; the world will soon slip through your hands, or rather you will soon slip through it : it seems but the other day when I received these same instructions from my dear father, that I am now leaving with you.

LAW

JULY THE SIXTEENTH.

Character of Washington.

No matter what may be the birth-place of such a man as WASHINGTON. No climate can claim, no country can appropriate him—the boon of Providence to the human race—his fame is eternity, and his residence creation. Though it was the defeat of our arms, and the disgrace of our policy, I almost bless the convulsion in which he had

his origin: if the heavens thundered and the earth rocked, yet, when the storm passed, how pure was the climate that it cleared—how bright in the brow of the firmament was the planet it revealed to us? In the production of Washington, it does really appear as if nature was endeavouring to improve upon herself, and that all the virtues of the ancient world were but so many studies preparatory to the patriot of the new.

Individual instances, no doubt, there were; splendid exemplifications of some single qualification—Cæsar was merciful, Scipio was continent, Hannibal was patient—but it was reserved for Washington to blend them all in one, and, like the lovely master-piece of the Grecian artist, to exhibit in one glow of associated beauty, the pride of every model, and the perfection of every master.

As a general, he marshalled the peasant into a veteran, and supplied by discipline the absence of experience. As a statesman, he enlarged the policy of the cabinet into the most comprehensive system of general advantage; and such was the wisdom of his views, and the philosophy of his councils, that to the soldier and the statesman he almost added the character of the sage.

A conqueror, he was untainted with the crime of blood—a revolutionist, he was free from any stain of treason; for aggression commenced the contest, and a country called him to the command—liberty unsheathed his sword—necessity stained, victory returned it. If he had paused here, history might doubt what station to assign him; whether at the head of her citizens or her soldiers—her heroes or her patriots. But the last glorious act crowned his career, and banishes hesitation. Who, like Washington, after having freed a country, resigned her crown, and retired to a cottage rather than reign in a capitol!

Immortal man! He took from the battle its crime, and from the conquest its chains—he left the victorious the glory of his self-denial, and turned upon the vanquished only the retribution of his mercy. Happy, proud America! The lightnings of heaven could not resist your sage—the temptations of earth could not corrupt your soldier! C. PHILLIPS.

JULY THE SEVENTEENTH.

Of the Executive Government of England.

THE king of England, besides his high court of parliament, has subordinate officers and ministers to assist him,

and who are responsible for their advice and conduct. They are made by the king's nomination, without either patent or grant; and, on taking the requisite oaths, they become immediately privy-counsellors during the life of the king that chooses them, but subject to removal at his pleasure.

The duty of a privy-counsellor appears from the oath of office, which consists of seven articles:—1. To advise the king according to the best of his cunning and discretion. 2. To advise for the king's honour, and good of the public, without partiality, through affection, love, need, doubt, or dread. 3. To keep the king's counsel secret. 4. To avoid corruption. 5. To help and strengthen the execution of what shall be there resolved. 6. To withstand all persons who would attempt the contrary. And lastly, in general, 7. To observe, keep, and do, all that a good and true counsellor ought to do to his sovereign lord.

The cabinet-council is a committee of the privy-council, consisting of a select number of ministers and noblemen, according to the king's opinion of their integrity and abilities, or attachment to the views of the court; but, though its operations are powerful and extensive, a cabinet-council is not essential to the constitution of England.

This observation naturally leads us to mention the person who is so well known by the name of the *prime minister*, a term unknown to the English constitution, though the office, in effect, is perhaps necessary. The constitution points out the lord high chancellor as minister; but the affairs of his own court give him sufficient employment. The first lord of the treasury is now considered as *prime minister*.

The lord high chancellor presides in the court of chancery, to moderate the severities of the law in all cases in which the property of the subject is concerned; and he is to determine according to the dictates of equity and reason. He is an officer of the greatest weight and power of any now subsisting in the kingdom, and is superior in precedence to every temporal lord.

The post of lord high treasurer has of late been vested in a commission, consisting of five persons, who are called lords of the treasury: but the first commissioner is supposed to possess the power of lord high treasurer. He has the management and charge of all the revenues of the crown, kept in the exchequer.

The lord president of the council was an officer formerly of great power, and has precedence next after the lord

chancellor and lord treasurer. His duty is to propose all the business transacted at the council-board, and to report to the king, when his majesty is not present, all its debates and proceedings.

The office of lord high admiral of England is now likewise held by commission, and is equal in its importance to any of the preceding, especially since the increase of the British naval power. The English admiralty is a board of direction as well as execution, and is in its proceedings independent of the crown itself.

The board of admiralty regulates the whole naval force of the realm, and names all its officers, or confirms them when named; so that its jurisdiction is very extensive.

There are besides two secretaries of state; one who manages the relations of the empire with foreign states, and the other who superintends the internal government of the country. One is called the secretary for foreign affairs, the other the secretary for the home department.

GOLDSMITH'S *Brit. Geog.*

JULY THE EIGHTEENTH.

Climate of the West Indies.

THE climate in all the West-India islands is nearly the same, allowing for those accidental differences which the several situations and qualities of the lands themselves produce. As they lie within the tropics, and the sun goes quite over their heads, passing beyond them to the north, they are continually subjected to the extreme of a heat which would be intolerable, if the trade-wind, rising gradually as the sun gathers strength, did not blow in upon them from the sea, and refresh the air in such a manner as to enable the cultivator to attend to his business, even under the meridian sun. On the other hand, as the night advances, a breeze begins to be perceived which blows smartly from the land, as it were from the centre, towards the sea, to all points of the compass at once.

In the same manner, when the sun advances towards the tropic of Cancer, and becomes vertical to these islands, he draws after him such a vast body of clouds, as shield the earth from his direct beams, and dissolving into rain, cool the air, and refresh the country thirsty with the long drought, which commonly prevails from the beginning of January to the end of May.

The rains in the West Indies (and in the East also) are by no means so moderate as with us. Our heaviest rains

are but dews in comparison with them. They are rather floods of water, poured from the clouds with a prodigious impetuosity; the rivers rise in a moment, new rivers and lakes are formed, and in a short time all the low country is under water. Hence it is, that rivers which have their source within the tropics swell and overflow their banks at a certain season; but so mistaken were the ancients in their idea of the torrid zone, that they imagined it to be dried and scorched up with a continual and fervent heat, and to be for that reason uninhabitable; whereas, in reality, some of the largest rivers of the world have their course within its limits, and the moisture is one of the greatest inconveniences of the climate in several places.

The rains make the only distinction of seasons in the West Indies: the trees are green the whole year round; there are no cold, no frosts, no snows, and but rarely some hail; the storms of hail are, however, very violent when they do happen, and the hail-stones very large and heavy.

It is in the rainy season (principally in the month of August, more rarely in July and September) that those islands are assaulted by hurricanes, the most terrible calamity to which they are subject from the climate: these destroy, at a stroke, the labours of many years; and cut off the hopes of the planter, often just at the moment when he thinks himself out of the reach of misfortune.

The hurricane is a sudden and violent storm of wind, rain, thunder, and lightning, attended with a furious swelling of the sea, and sometimes with an earthquake; in short, with every circumstance which the elements can assemble, that is terrible and destructive. First there are seen, as the prelude to the ensuing havock, whole fields of sugar-canes whirled into the air, and scattered over the face of the country; the strongest trees of the forest are torn up by the roots, and driven about like stubble; the wind-mills are swept away in a moment; the utensils, the fixtures, the ponderous copper-boilers, and stills of several hundred weight, are wrenched from the ground, and battered to pieces; the houses are no protection; their roofs are torn off at one blast; while the rain, which in an hour rises five feet, rushes into them with irresistible violence.

JULY THE NINETEENTH.

The Coffee-Tree.

THE coffee-tree, whose seeds or berries afford a well-known and agreeable liquor, is a native of Arabia Felix,

where it generally rises to the height of seven or eight, and sometimes twelve feet, with a trunk from ten to fifteen inches in circumference.

It is covered with a gray smooth bark, and shoots out through the whole length of its stem, a growth of branches which are always opposite to each other, and the leaves, which resemble those of the bay-tree, arranged in pairs in the same manner. From the bottom of the leaves spring fragrant white flowers, very much like those of the jasmine; and when these flowers or blossoms drop off, they leave a small fruit behind, which is green at first, but reddens as it ripens, and is like a hard cherry both in shape and colour. Two, three, or more of these berries grow together, on the same part of the twig; each coated with a husk or tegument, enclosing another and finer skin, in which two seeds or kernels are contained, which are what we call coffee.

The fruit is usually gathered in May; which is done by shaking the trees, the berries falling on cloths spread underneath to receive them. These being laid on mats to dry in the sun, the outer husks are opened and separated by drawing rollers of wood or iron over them; after which the berries are exposed to the sun a second time, and then sifted clean for use of sale. The husks, however, are not wasted; for the Arabs roast them, as we do the berries, and the drink made of them, having a little tartness, is cooling and pleasant in the heat of summer.

The drink made of coffee-berries has been common in Europe above an hundred years, and much longer among the Turks.

Coffee was first brought into France by the famous traveller M. Thevenot; and a Greek called Pasqua, who was brought to England as a servant in 1652, first set up the profession of a coffee-house keeper, and introduced the use of the liquor among us.

JULY THE TWENTIETH.

Manner of fishing for Pearls in the East Indies.

THERE are two seasons for pearl fishing; the first is in March and April, and the last in August and September; and the more rain there falls in the year, the more plentiful these fisheries are. At the beginning of the season there are sometimes two hundred and fifty barks on the banks; the larger barks have two divers; and the smaller

one each. As soon as the barks arrive at the place where the fish lie, and have cast anchor, each diver binds a stone six inches thick and a foot long, under his body; which serves him as ballast, prevents his being driven away by the motion of the water, and enables him to walk more steadily under the waves. They also tie another very heavy stone to one foot, by which they are speedily sent to the bottom of the sea; and as the oysters are usually firmly fastened to the rocks, they arm their hands with leathern mittens, to prevent their being bruised in pulling the oysters violently off; but this is sometimes performed with an iron rake. Lastly, each diver carries down with him a large net in the manner of a sack, tied to his neck by a long cord, the other end of which is fastened to the side of the bark. This net is to hold the oysters gathered from the rock, and the cord is to pull up the diver when his bag is full, or when he wants air.

Thus equipped, he sometimes precipitates himself sixty feet under water; and as he has no time to lose, he no sooner arrives at the bottom, than he begins to run from side to side, tearing up all the oysters he meets with, and putting them with the utmost expedition into his net.

At whatever depth the divers are, the light is so great that they easily see all that passes in the sea, and sometimes, to their great consternation, perceive the approach of enormous fishes, to which their dexterity in muddying the water does not always save them from becoming a prey: and of all the dangers attending the fishery, this is the greatest and the most usual.

The best divers will keep under water near half an hour, and the least skilful do not stay less than a quarter. During all this time they hold their breath, which they acquire the power of doing by long practice. When they want relief, they pull the rope to which the bag is fastened, and hold fast by it with both hands; on which those in the bark draw them up into the air, and unload them of their oysters, amounting sometimes to five hundred.

JULY THE TWENTY-FIRST.

The Beauties of Vegetation.

I HAVE often been surprised to find those who possessed a very acute susceptibility of artificial or literary grace, and were powerfully affected by the beauties of a poem, a piece of sculpture, or painting, not at all more sensible

of the charms of a tree or a floweret than a common and inelegant spectator. This is certainly the effect of a superficial judgment! for there is no truth of which philosophers have been longer convinced, than that the realities of Nature infinitely exceed the most perfect productions of imitating art.

Defects are always discovered in works of art when they are examined with a microscope; but a close examination of a leaf of a flower is like taking off a veil from the face of beauty. The finest needle ever polished, and pointed by the most ingenious artist, appears, when it is viewed by the solar microscope, quite blunt; while the sting of a bee, however magnified, still retains all its original acuteness of termination. The serrated border of the petal of a flower, and the fringe on the wing of a fly, display an accuracy of delineation which no pencil ever yet could rival. The taste of the florist has not, indeed, been much admired or generally aspired at; while that of the connoisseur in painting is considered as a mark of elegance of character, and an honourable distinction; yet surely it is an inconsistency to be transported with the workmanship of a poor mortal, and feel no raptures in surveying those highly finished pictures in which it is easy to trace the finger of the Deity.

The excellent taste which now prevails in gardening usually combines the shrubbery and the grove. The tall trees of the forest constitute the back ground in the living landscape; and the shrubs, beneath and before them, form the underwood, in a delightful resemblance to the natural coppice and the uncultivated forest.

The plane-tree, which is now frequently planted in our gardens, may be considered as a classical tree, for the ancient writers often mention it; and some of the finest philosophical dialogues of antiquity passed under the cool retreat of its broad and vivid foliage

KNOX.

JULY THE TWENTY-SECOND.

On Social Worship. (A Sunday Lesson.)

Praise is devotion fit for mighty minds,
The jarring world's agreeing sacrifice.

AND this is surely of a social nature. One class of religious duties separately considered, tends to depress the mind, filling it with ingenious shame and wholesome

sorrow; and to these humiliating feelings solitude might perhaps be found congenial; but the sentiments of admiration, love, and joy, swell the bosom with emotions which seek for fellowship and communication. The flame indeed may be kindled by silent musing; but when kindled it must infallibly spread. The devout heart, penetrated with large and affecting views of the immensity of the works of God, the harmony of his laws, and the extent of his beneficence, bursts into loud and vocal expressions of praise and adoration; and, from a full and overflowing sensibility, seeks to expand itself to the utmost limits of creation. The mind is forcibly carried out of itself, and, embracing the whole circle of animated existence, calls on all above, around, below, to help to bear the burden of its gratitude. Joy is too brilliant a thing to be confined within our own bosoms; it burnishes all Nature, and with its vivid colouring gives a kind of fictitious life to objects without sense or motion. There cannot be a more striking proof of the social tendency of these feelings, than the strong propensity we have to *suppose* auditors where there are none. When men are wanting, we address the animal creation; and, rather than have none to partake our sentiments, we find sentiment in the music of the birds, the hum of insects, and the low of kine: nay, we call on rocks, and streams, and forests, to witness and share our emotions. Hence the royal shepherd, sojourning in caves and solitary wastes, calls on the hills to rejoice and the floods to clap their hands; and the lonely poet, wandering in the deep recesses of uncultivated Nature, finds a temple in every solemn grove, and swells his chorus of praise with the winds that bow the lofty cedars. And can he who, not satisfied with the wide range of existence, calls for the sympathy of the inanimate creation, refuse to worship with his fellow-men? Can he who bids Nature attend, forget to join every living soul in the universal hymn? Shall we suppose companions in the stillness of deserts, and shall we overlook them amongst friends and townsmen? It cannot be! Social worship, for the devout heart, is not more a duty than it is a real want.

BARBAULD

JULY THE TWENTY-THIRD.

Character of George I.

IF George I. was not distinguished for shining talents or heroic virtues, much less can we discern, on a general review of his character, any remarkable deficiency of understanding, or propensity to vice. Acceding to the crown of Britain when far advanced in life, he seemed ever to consider himself rather as a German elector than as a king and the influence and power of Great Britain were of little estimation in his eyes, when directed to any other end than the aggrandisement of his native country.

With respect to the internal government of his kingdoms, the rectitude and benevolence of his intentions were always apparent; but he was, from the nature of his situation, compelled to throw himself into the hands of a party, and, from the easiness of his disposition, he was too often persuaded to acquiesce in measures which a more perfect acquaintance with the real state of facts and opinions would have shown to have been as contrary to his interests as there is reason to believe they frequently were to his inclination. In the view of Europe at large, he sustained the character of a prudent, an able, and a fortunate Prince.

Notwithstanding the total neglect by the court, and the violence of party-rage that prevailed in this as well as in the former reign, literature and the arts continued to flourish in a very high degree; and we view with surprise, amidst scenes of contention and turbulence, a constellation of geniuses shedding a peculiar lustre over this period of British history.

Scarcely had Locke, Temple^{*}, and Dryden, the departing luminaries of the former age, sunk beneath the western sky, when Addison, Swift, Pope, Shaftsbury, and Bolingbroke, arose in the east. The writings of Addison in particular merit a most distinguished and honourable mention: and the advantage which the community has reaped from the wide diffusion of them, no power of calculation can ascertain.

In the province of architecture the age was less fortunate. Gibbs and Kent, with unequal steps, and at almost viewless distance, followed the celebrated Sir Christopher Wren: of whom the magnificent plan for rebuilding the

city of London in 1666, would have alone sufficed to perpetuate the memory.

At this period also the English school of painting could produce (a Thornhill excepted) no greater artist than Jervas; whose name is immortalised, not by his own performances, but by "the verse eternal which embalms the dead."

During the course of this reign Sir Isaac Newton terminated his long career of life: but that of his fame and glory will be coëval only with the globe itself; whose laws he has developed and explained, with an energy and sagacity wholly stupendous, and approaching, perhaps, the limits of supernatural intelligence. BELSHAM.

JULY THE TWENTY-FOURTH.

Ice-Islands, and Icebergs.

THE name of ice-island is given by sailors to a great quantity of ice collected into one huge mass, and floating upon the seas near or within the polar circles. Many of these are to be met with on the coast of Spitzbergen, to the great danger of the shipping employed in the Greenland fishery. In the midst of these tremendous masses, navigators have been arrested in their career and frozen to death.

The forms assumed by the ice in this chilling climate are pleasing to the most incurious eye. The surface of that which is congealed from the sea-water is flat, even, hard, and opaque; resembling white sugar, and incapable of being slid on. The greater pieces or fields are many leagues in length; the lesser are the meadows of the seals, on which, at times, those animals frolic by hundreds.

The approximation of two great fields produces a most singular phenomenon; they force smaller pieces out of the water, and add them to their own surface, till at length the whole forms an aggregate of tremendous height. They float in the sea like so many rugged mountains, and are sometimes five or six hundred yards thick, the far greater part of which is concealed beneath the water. Those which remain in this frozen climate receive continual growth; others are by degrees wafted into southern latitudes, and melt gradually by the heat of the sun, till they waste away and disappear in the boundless element.

It is not uncommon to find great masses of ice in high latitudes

is often attended with a noise that for a time takes away the sense of hearing any thing else; and that of the smaller, with a grinding of unspeakable horror. The water which dashes against the mountainous ice freezes into an infinite variety of forms, and gives the voyager ideal towns, streets, churches, steeples, and every shape which imagination can frame.

Besides the fields of ice, there are icebergs, (as they are called) or large bodies of ice, that fill the valleys between the high mountains in northern latitudes. Among the most remarkable are those of the east coast of Spitzbergen. They are seven in number, at considerable distances from each other: each fills the valleys for tracts unknown, in a region totally inaccessible in the internal parts. The first exhibits a front three hundred feet high, emulating the emerald in its green colour: cataracts of melted snow precipitate down various parts, and black spring mountains, streaked with white, bound the sides, and rise crag above crag, as far as the eye can reach in the back ground.

GOLDSMITH.

JULY THE TWENTY-FIFTH.

On Animal Instinct.

It is astonishing to consider the different degrees of care that descend from the parent to the young, so far as is absolutely necessary for leaving a posterity. Some creatures cast their eggs as chance directs them, and think of them no further; as insects, and several kinds of fish: others, of nicer frame, find out proper beds to deposit them in, and there leave them; as the serpent, the crocodile, and the ostrich: others hatch their eggs and tend the birth until it is able to shift for itself.

What can we call the principle which directs every different kind of bird to observe a particular plan in the structure of its nest, and directs all of the same species to work after the same model? It cannot be imitation; for though you hatch a crow under a hen, and never let it see any of the works of its own kind, the nest it makes will be the same, to the laying of a stick, with all the nests of the same species. It cannot be reason; for, were animals endued with it to as great a degree as man, their buildings would be as different as ours, according to the different conveniencies that they would propose to themselves.

With what caution does the hen provide herself a nest in places unfrequented, and free from noise and disturbance ! When she has laid her eggs in such a manner that she can cover them, what care does she take in turning them frequently, that all parts may partake of the vital warmth ! When she leaves them to provide for her necessary sustenance, how punctually does she return before they have time to cool, and become incapable of producing an animal ! In the summer you see her giving herself greater freedoms, and quitting her care for above two hours together ; but in winter, when the rigour of the season would chill the principles of life, and destroy the young ones, she grows more assiduous in her attendance, and stays away but half the time.

When the birth approaches, with how much nicety and attention does she help the chick to break its prison ! not to take notice of her covering it from the injuries of the weather, providing it proper nourishment, and teaching it to help itself ; nor to mention her forsaking the nest, if after the usual time the young one does not make its appearance.

Yet the hen that has all this seeming ingenuity, considered in other respects, is without the least glimmering of thought or common sense. She mistakes a piece of chalk for an egg, and sits upon it in the same manner : she is insensible of any increase or diminution in the number of those she lays : she does not distinguish between her own and those of another species, and when the birth appears to be a different bird she will cherish it for her own.

ADDISON.

JULY THE TWENTY-SIXTH.

Account of the First Crusade.

A FEW years before the elevation of Alexis to the imperial throne of Constantinople, in 1081, the city of Jerusalem had fallen into the hands of the Turks, at a time when the zeal for pilgrimages to the holy sepulchre had increased beyond the example of former ages. The roads to Jerusalem were continually crowded with multitudes of both sexes and of every rank, who professed their contempt of life, as soon as they had kissed the tomb of their Redeemer. Sultan Toucush asserted his claim to the dominions of Syria and Palestine ; and the hereditary command of the holy city and territory he intrusted to his emir Ortok. From Nice to Jerusalem, the western countries

of Asia were a scene of hostility ; and the pilgrims were the victims of private rapine or public oppression. Their misfortunes were reported over all Europe ; and the relief of the Holy Land, under the banner of the cross, became the ruling passion both of sovereigns and their people.

This spirit was roused into action by a fanatic, Peter the Hermit, who, having visited the holy sepulchre, and witnessed the oppressions practised by the Turks, determined to employ every energy to deliver Palestine from their domination. Pope Urban the Second applauded his design ; and this zealous missionary traversed with success Italy and France. He preached to innumerable crowds in the churches, the streets, and the highways ; making every breast glow with martial enterprise.

A council was assembled in 1095 by Urban, for deciding on the propriety of this important enterprise, and was so fully attended, both by the clergy and laity of several European nations, that it was held in a spacious plain adjacent to the city. The pontiff addressed a willing audience, and his exhortation was frequently interrupted with, *God wills it ! God wills it !*—It is, indeed, the will of God, replied the pope ; and let this memorable word be for ever adopted as your cry of battle, to animate the courage of the champions of Christ. His cross is the symbol of your salvation ; wear it, a red and bloody cross, as a pledge of your sacred and irrevocable engagement.

The pope also proclaimed a plenary indulgence to those who should enlist under the banner of the cross, the absolution of all their sins, and an acquittance for all that might be due of canonical penance. The robber, the incendiary, the murderer, and thousands of inferior offenders, eagerly embraced these terms of atonement : which were further heightened by the hopes of plunder, and the desire of sensual gratification.

Sixty thousand persons of both sexes flocked round Peter the Hermit, and prayed him to lead them to the holy sepulchre. The fanatic accordingly assumed the office of a general, for which he was totally unqualified, and led his votaries along the banks of the Rhine and the Danube. Their wants and numbers soon compelled them to separate ; and Walter the Pennyless, a valiant though needy soldier, conducted the vanguard of the pilgrims. The footsteps of Peter were closely followed by the monk

the rear was pressed by two hundred thousand of the refuse of the people, who mingled with their devotion a brutal licentiousness of rapine, prostitution, and inebriety.

JULY THE TWENTY-SEVENTH.

The First Crusade. (Continued.)

ABOUT one-third only of the naked fugitives, with Peter at their head, found means to reach Constantinople; and by the caution of the Emperor Alexis were transported to the Asiatic side of the Bosphorus, and advised to wait the arrival of their brethren. But their blind impetuosity urged them to rush headlong against the Turks, who occupied the road to Jerusalem; and three hundred thousand of the first crusaders perished by the Turkish arrows, before their brethren, who had more reason in their madness, had completed the preparations for their enterprise.

In the first crusade, some of the great sovereigns of Europe embarked: but the religious ardour was strongly felt by the princes of the second order, and who held important stations in the feudal system. Of the principal, the foremost in war and council was Godfrey of Boulogne, a man whose valour was matured by prudence and moderation, and whose piety, though blind, was sincere. He was accompanied by his two brothers, Eustace and Baldwin; and their confederate force was composed of fourscore thousand foot and ten thousand horse. Hugh count of Vormandois, Robert duke of Normandy, Adhemar bishop of Puy, and several other persons of note, had numerous trains of devotees to follow their standard.

There are various accounts respecting the numbers of the first crusaders, some making them six hundred thousand, others reducing them to one hundred thousand only. From their station in the neighbourhood of Nicomedia, they advanced in successive divisions, and commenced their pious warfare against the sultan Soliman, by besieging and taking his capital, Nice.

The decline of the Turkish empire facilitated the progress of the crusaders. The inheritance of Malek Snah was disputed by his four sons; and civil war swept off the bravest of the Turkish soldiers. The Christians were

of Jerusalem. His example was followed with emulation by his companions in arms; and the holy city was rescued from the Mahometans. The garrisons and inhabitants were for three days abandoned to slaughter; and the cruel conquerors were at last rather fatigued than satiated with shedding blood.

After the fanatics had accomplished their vow, and bedewed with tears of joy the monument of their redemption, they judged it expedient to proceed to the election of a king, in order to secure their conquests in Palestine. Several competitors presented themselves from among the number of their chiefs: but the free voice of the army proclaimed Godfrey the most worthy of the champions of christendom. His magnanimity accepted a trust as full of danger as it was of glory; but the devout general refused the name and ensigns of royalty, and assumed the more appropriate title of "defender and baron of the holy sepulchre."

JULY THE TWENTY-EIGHTH.

The Second and Third Crusades.

IN the reign of Manuel, in 1147, the second crusade was undertaken by Conrad III. emperor of Germany, and Louis VII. king of France. The nobles were animated by the presence of their sovereigns: seventy thousand knights, with their immediate attendants, swelled the cavalry to four hundred thousand; and if to these are added the infantry and the monks, the women and the children, the aggregate number must exceed belief, and will almost defy computation. Yet this force, which threatened the extinction of the Mahometans, served only to expose the misfortunes and folly of a holy war.

The Germans were urged by emulation; the French were retarded by jealousy: and Louis had scarcely passed the Bosphorus, when he met the vanquished emperor returning with the remnant of his army, from a glorious but unsuccessful action on the banks of the Mæander. The fate of the French monarch was almost similar: he was surprised and surrounded by the Turks, as he pursued his march with inconsiderate rashness. With difficulty Louis escaped from the fatal arrows of his enemies; and after sheltering the relics of his host in the friendly p^{er}

rad joined the Christian powers of Syria, in the fruitless siege of Damascus. Baffled in this final effort, the two monarchs were content to embark for Europe, and their sole acquisition was the personal fame of piety and courage.

In 1189 the third crusade was undertaken. The grand division was led by the emperor Frederic Barbarossa; the French and English who embarked in this expedition, preferred the navigation of the Mediterranean; yet Frederic mustered in the plains of Hungary fifteen thousand knights and as many esquires, sixty thousand horse, and a hundred thousand foot. The veteran genius of the chief imparted confidence to his companions and soldiers; and the Turks were awed by the fame of a prince who had signalized himself in forty campaigns.

Disease and famine, however, pursued the fainting steps of the Christians through the deserts; and when they reached the gates of Iconium, no more than a thousand knights were capable of service: yet by a resolute assault they stormed the capital of the sultan, who sued in vain for pardon and peace. But as the victorious Frederic advanced into Cilicia, he was unfortunately drowned in the petty stream of Calycadnus. The remainder of the forces was consumed by sickness and desertion: and the emperor's son, with the greatest part of his Suabian vassals, expired at the siege of Acre; in which place Richard of England, surnamed *Cœur de Lion* (that is, lion-hearted,) reaped never-fading laurels.

MAVOR.

JULY THE TWENTY-NINTH.

On Profane Swearing. (A Sunday Lesson.)

It might puzzle a philosopher to trace the love of swearing to its original principle, and assign its place in the constitution of man.

Is it a passion, or an appetite, or an instinct? What is its just measure, its proper object, its ultimate end?

Or shall we conclude that it is entirely the work of art? a vice which men have invented for themselves without prospect of pleasure or profit, and to which there is no imaginable temptation in nature

Can any thing further be thought of in its defence? Is it an honour to swear? There are indeed some persons, if we may judge by the self-complacency apparent in their

air and manner, who are so far mistaken, as to fancy that this vice is an improvement of discourse, giving a spirit, a kind of high relish to their sentiments; and accordingly they serve it up on every occasion, and mix it with all their remarks. Indeed it takes upon itself sometimes to be more than a mere ornament in conversation, and becomes the more considerable part of what people have to offer. You find, if you reflect on what they have said, that the oath is the whole substance of the observation.

If it be an accomplishment, it is such an one as the meanest person may make himself master of; requiring neither rank nor fortune, neither genius nor learning.

But if it be no test of wit, we must allow perhaps that it wears the appearance of valour. Alas! what is the appearance of any thing? The little birds perch upon the image of an eagle.

True bravery is sedate and inoffensive: if it refuse to submit to insults, it offers none: begins no disputes, enters into no needless quarrels; is above the little, troublesome ambition to be distinguished every moment: it hears in silence, and replies with modesty; fearing no enemy, and making none; and is as much ashamed of insolence as of cowardice.

OGDEN.

JULY THE THIRTIETH.

Character and Reign of George II.

THE character of this monarch it is not easy either to mistake or to misrepresent. Endowed by nature with an understanding by no means comprehensive, he had taken little pains to improve and expand his original powers by intellectual cultivation. Equally a stranger to learning and the arts, he saw the rapid increase of both under his reign, without contributing in the remotest degree to accelerate that progression by any mode of encouragement, or even bestowing, probably, a single thought on the means of their advancement.

Inheriting all the political prejudices of his father, he was never able to extend his views beyond the adjustment of the Germanic balance of power; and resting with unsuspecting satisfaction in that system into which he had been early initiated, he never rose to the conception of that simple, dignified, and impartial conduct, which

it is equally the honour and interest of Great Britain to maintain in all the complicated contests of the continental states.

In the internal government of his kingdoms, George II. appears to much greater advantage than in the contemplation of his system of foreign politics. The general principles of his administration, both civil and religious, were liberal and just. Those penal statutes which form the disgrace of our judicial code, were in his reign meliorated and virtually suspended, by the superior mildness and equity of the executive power; and it was a well-known and memorable declaration of this beneficent monarch, "that during his reign there should be no persecution for conscience sake." Though subject to frequent sallies of passion, they were transient, and marked by no serious effects.

On various occasions he gave signal demonstrations of personal bravery; nor did the general tenour of his conduct exhibit proofs less striking of his rectitude and integrity: and if he cannot be ranked among the greatest, he is at least entitled to be classed with the most respectable princes of the age in which he lived; and his memory is deservedly held in national esteem and veneration.

The general state of literature and the arts during his reign received a shadow of protection and encouragement in the countenance given by queen Caroline (a princess of an excellent understanding and much liberality of sentiment) to several learned men with whom she loved to converse.

The prince of Wales, also, at a subsequent period, showed a disposition, though restrained in the ability, to become a munificent patron of literature. But to whatever degree of perfection, science, literature, and the arts, arose during even its last splendid and memorable period, the sole and exclusive honour of patronage appertains, not to the court, but to the taste discernment, and generosity, of the nation.

BELSHAM.

JULY THE THIRTY-FIRST.

Solon and Cræsus.

THE name of Cræsus, the fifth and last king of Lydia,

proverb to describe the possession of immense riches. When Solon, the legislator of Athens, and one of the most celebrated of the ancient sages of Greece, came to Sardis, where Cræsus held his court, he was received in a manner suitable to the reputation of so great a man. The king, attended by his courtiers, appeared in all his regal pomp and splendour, dressed in the most magnificent apparel. Solon, however, did not discover surprise or admiration. This coldness and indifference astonished and displeased the king: who next ordered that all his treasures, his magnificent apartments, and costly furniture, his diamonds, statues, and paintings, should be shown to the philosopher.

When Solon had seen all, he was brought back to the king; who asked whether he had ever beheld a happier man than he. Yes, replied Solon: one Tellus, a plain but worthy citizen of Athens, who lived all his days above indigence, saw his country in a flourishing condition, had children who were universally esteemed; and, having had the satisfaction of seeing those children's children, died gloriously fighting for his country.

Such an answer, in which gold and silver were accounted as nothing, seemed to Cræsus to indicate strange ignorance and stupidity. However, as he flattered himself with being ranked in the second degree of happiness, he asked him whether, after Tellus, he knew another happier man? Solon answered, Cleobis and Biton, of Argos, two brothers, perfect patrons of fraternal affection, and of the respect due from children to their parents. Upon a solemn festival their mother, a priestess of Juno, was obliged to go to the temple; and the oxen not being ready for her chariot, they put themselves in the harness, and drew it thither amidst the blessings of the people. Every mother present congratulated the priestess on the piety of her sons. She, in the transport of her joy and thankfulness, earnestly entreated the goddess to reward her children with the best thing that Heaven could give to man. Her prayers were heard; when the sacrifice was over, they fell asleep in the temple, and there died in a soft and peaceful slumber.

What, then, exclaimed Cræsus, you do not reckon me in the number of the happy! King of Lydia, replied Solon, true philosophy, considering what an infinite number of vicissitudes and accidents the life of man is liable to, does not allow us to glory in any prosperity we enjoy ourselves, nor to admire happiness in others which, per-

haps, may prove only transient or superficial. No man can be esteemed happy, but he whom Heaven blesses with success to the last. As for those who are perpetually exposed to dangers, we account their happiness as uncertain as the crown to a champion before the combat is determined.

It was not long before Cræsus experienced the truth of what Solon had told him. Being defeated by Cyrus king of Persia, and his capital taken, he was himself taken prisoner; and, by order of the conqueror, laid bound upon a pile to be burnt alive. The unfortunate prince now recollected the admonition of the Athenian sage, and cried aloud, O Solon, Solon, Solon!

Cyrus, who, with the chief officers of his court, was present, was curious to know why Cræsus pronounced that name with so much vehemence. Being told the reason, and reflecting upon the uncertainty of all sublunary things, he was touched with commiseration, ordered the monarch to be taken from the pile, and treated him afterwards with honour and respect.

Thus had Solon the glory of saving the life of one king, and giving a wholesome lesson of instruction to another.

ROBINSON'S *Ancient History*.

AUGUST THE FIRST.

Natural Phenomena of August.

IN the beginning of this month the weather is still hot, and usually calm and fair. What remained to be perfected by the powerful influence of the sun, is daily advancing to maturity. The farmer now sees the principal object of his culture, and the chief source of his riches, waiting only for the hand of the gatherer. Of the several kinds of grain, rye and oats are usually the first ripened; but this varies according to the period of sowing; and some of every species may be seen fit for cutting at the same time.

Every fair day is now of great importance; for, when the corn is once ripe, it is liable to continual damage while standing, either from the shedding of the seeds, from the depredations of birds, or from storms. The utmost diligence is therefore used by the careful husbandman to get it in, and labourers are hired from all quarters to

This pleasing harvest scene is beheld in its perfection only in the open field countries, where the sight can take in at once an uninterrupted extent of land waving with corn, and a multitude of people engaged in the various parts of the labour. It is a prospect equally delightful to the eye and the heart, and which ought to inspire every sentiment of benevolence to our fellow-creatures, and gratitude to our Creator.

The rural festival of *harvest home* is an extremely natural one, and has been observed in almost all ages and all countries. The jovial harvest supper cheers the heart of the poor labourer, and prepares him to begin without murmuring the labours of another year.

This month is the season of another kind of harvest in some parts of England, which is the *hop-picking*. The hop is a climbing plant, sometimes growing wild in hedges, and is cultivated on account of its use in making malt liquors. It is planted in regular rows, and poles are set for it to run upon. When the poles are covered to the top, nothing can make a more elegant appearance than one of these hop-gardens. At the time of gathering, the poles are taken up with the plants clinging to them; and the scaly flowering heads, which are the part used, are carefully picked off. These are a finely-flavoured bitter, which taste they readily impart to hot water. They thus improve our beer, and make it keep better. Kent, Sussex, and Worcestershire, are the counties most famous for the growth of hops.

AIRIN.

AUGUST THE SECOND.

Confucius, the Chinese Philosopher.

CONFUCIUS, descended from one of the first emperors of China, was born 551 years before the birth of Christ. A title of distinction is to this day hereditary in his family, and in his family alone, throughout the empire, and they are also freed from the payment of taxes. They commonly reside in the province of Canton, in the city of Kiofen, where Confucius was born. The house in which the philosopher dwelt is yet to be seen, and many emperors have paid it a respectful visit.

In the 30th year of his age, Confucius, being already thoroughly skilled in the learning of the ancients, devoted himself to the study of philosophy. He led the most

austere life; ate only of the plainest and simplest food, drank nothing but water, and slept on the earth, with no pillow but his arm. He had three thousand disciples; and lived to the age of 73.

In most cities of China there are magnificent colleges crected in honourable remembrance of him, with these or like inscriptions in golden characters: *To the great, the eminent, the illustrious King of the Learned.*

His doctrines were to this purpose: Reason is a present to mankind from above; it is the source of the continual watch the prudent man has over himself, and of the scrupulous examination he makes of every motion of his own heart.

Humanity is the firm basis of virtue. The cordial love with which we ought to embrace mankind is innate to man. Nature's first dictates excite us to it; it is the soul of laws, and the distinguishing characteristic which constitutes our pre-eminence over all other creatures.

The pious duties of our parents should be of still greater energy than the generous passions for mankind; the former will inspire us by degrees with the latter. From this universal love springs justice, that noble office of giving every man his right. The difference between the love we should have for our parents and other men, and between that we should have for the truly worthy and those who are less so, may be looked on as shades of the most excellent picture of creation; and a harmony of duties, which the Divine Will has ordered for the universal good, and quite out of our power to alter.

AUGUST THE THIRD.

Of the Diamond.

THE diamond, in its most perfect state, is clear and pellucid as the purest water, and is eminently distinguished from all other substances by its vivid splendour, and the brightness of its reflections. It is, however, sometimes found tinged with a yellow, blue, red, or greenish cast, by the accidental mixture of some metallic particles.

The diamond is found of various sizes, but generally small, large ones being seldom met with. Its shape is still more uncertain; but its varieties of figure are never found to affect the internal stucture of the body, which, from a minute examination with a microscope, appears to consist of several parallel plates or tables extremely thin, and laid over one another with the utmost regularity.

Diamonds are found chiefly in the kingdoms of Golconda, Visapour, Bengal, Brazil, and the island of Borneo. The mines are generally adjacent to rocky hills and mountains, and sometimes the diamonds are found scattered in the earth near the surface. In other places the miners dig through rocks, till they come to a sort of mineral earth, in which the diamonds are enclosed. To separate them from this earth, which adheres closely to them, they undergo several washings and siftings. The miners are obliged to work almost naked, and have likewise inspectors to prevent their concealing the diamonds, which they sometimes find means to do by swallowing them. If the miners meet with a stone of fifteen carats and upwards, they are allowed a reward besides their usual pay, which is very little.

To bring diamonds to that perfection in which their beauty consists, the diamond cutters begin by rubbing two rough diamonds against each other; by this means they take off the dull outer crust, and reduce them to form, in order to their being polished; and the powder rubbed off serves afterwards to polish the stones. Diamonds are polished by means of a mill, which turns a wheel of cast iron, smeared with diamond-dust mixed with oil of olives. This wheel moves horizontally; and, before the diamonds are applied to it, they are soldered into pieces of metal prepared for that purpose.

The largest diamond ever known to have been found was that in the possession of the Great Mogul, which weighed two hundred and seventy-nine carats, each carat being four grains. The diamonds, says Mr. Mawe, in possession of the Prince Regent of Portugal, are worth three millions sterling.

AUGUST THE FOURTH.

On Procrastination.

THE folly of allowing ourselves to delay what we know cannot be finally escaped, is one of the general weaknesses which prevail to a greater or less degree in almost every mind.

It is, indeed, natural to have particular regard to the time present, and to be most solicitous for that which is, by its nearness, enabled to make the strongest impressions. When, therefore, any sharp pain is to be suffered, or any formidable danger to be incurred, we can scarcely exempt

ourselves wholly from the seducements of imagination; we readily believe that another day will bring some support or advantage which we now want; and are easily persuaded, that the moment of necessity, which we desire never to arrive, is at a great distance from us.

When evils cannot be avoided, it is wise to contract the interval of expectation; to meet the mischiefs which will overtake us if we fly; and suffer only their real malignity, without the conflicts of doubt and anguish of anticipation.

To act is far easier than to suffer: yet we every day see the progress of life retarded by the mere repugnance to exertion, and find multitudes repining at the want of that which nothing but idleness hinders them from enjoying. Laziness is commonly associated with timidity. Either fear originally prohibits endeavours, by infusing despair of success; or the frequent failure of irresolute struggles, and the constant desire of avoiding labour, impress by degrees false terrors on the mind.

Among all who sacrifice future advantage to present inclination, scarcely any gain so little as those that suffer themselves to freeze in idleness. Others are corrupted by some enjoyment of more or less power to gratify the passions; but to neglect our duties, merely to avoid the labour of performing them (a labour which is always punctually rewarded), is surely to sink under weak temptations. Idleness never can secure tranquillity: the call of reason and of conscience will pierce the closest pavilion of the sluggard; and, though it may not have force to drive him from his down, will be loud enough to hinder him from sleep. Those moments which he cannot resolve to make useful by devoting them to the great business of his being, will still be usurped by powers that will not leave them to his disposal; remorse and vexation will seize upon them, and forbid him to enjoy what he is so desirous to appropriate.

The certainty that life cannot be long, ought to awaken every man to the active prosecution of whatever he is desirous to perform. It is true that death may intercept the swiftest career; but he who is cut off in the execution of an honest undertaking, has at least the honour of falling in his rank, and has fought the battle, though he missed the victory.

JOHNSON.

AUGUST THE FIFTH.

Of the Duties of Friendship. (A Sunday Lesson.)

AT the same time that you are assiduous to secure and to perpetuate the blessings of friendship, be careful to deserve them. Never forget, that he who has a friend must show himself friendly. Between minds as well as between bodies, attraction can subsist no longer than it is reciprocal; and mutual kindness can only be cherished by mutual endeavours to serve and oblige. If you are frequently receiving from your friend tokens of attachment and affection, watch for opportunities of making equivalent returns; or if inequality of condition should on your part render this impracticable, be the more careful to seize every occasion of expressing, in ways not inconsistent with the delicacy of friendship, your sense of obligation. Above all, study to render yourself worthy of the friendship you value, by cherishing all those amiable qualities, and practising all those substantial virtues, which unite to form the character of a true friend. More particularly cultivate the kind and generous affections.

Friendship is the reciprocation of affection; and he who has none to bestow, has no right to expect any in return. To hope to gain a friend without this, is as if the merchant should expect to purchase a jewel of the highest value without being able or willing to pay the price for it. On the contrary, kindness will always be found to produce kindness; and no man will fail to be rich in the returns of love, who is careful to purchase it with the payment of love. Exercise an habitual command over yourselves, to check those sudden gusts of ill humour or passion which the casual interference of opinions, inclinations, or interests may tend to excite.

The maxim is well-founded, that friendship is not to be formed with an angry man. Be ever ready to allow to your friend that indulgence which you claim for yourself; and rather by gentleness and forbearance invite generosity, than by a rude and unyielding assertion of your right awaken the latent spirit of discord. Be upon your guard against every propensity to peevishness and fretfulness: nothing is more dissonant to the tones of love than the harsh murmurs of discontent. Friendship loves to breathe a free and pleasant air, and to bask in the sunshine of cheerfulness: amidst the fogs and damps of

fretfulness, it sickens and dies. Even in sorrow, if you wish to secure the consolations of friendship, you must refrain from peevish and ill-humoured complaints. Friendship must provide itself against the storm as well as the calm; and he who wishes to preserve a friend to the last hour of his life, must endeavour to carry a mild, placid, and affectionate temper through all the vicissitudes of the world.

ENFIELD.

AUGUST THE SIXTH.

Of Thales, Heraclitus, Democritus, and Simonides.

THALES, born at Miletus 640 years before Christ, was the first Greek who treated of natural philosophy. He gave general notions of the universe; and maintained that an only Supreme Intelligence regulated all its motions. He discovered the cause of eclipses, which in those days were accounted prodigies. On being asked whether a man could conceal his actions from the Deity, he answered, How should that be possible, since he cannot conceal from Him even his thoughts? He was the founder of the Ionic sect of philosophers; and his great knowledge procured him a place among the seven wise men of Greece.

HERACLITUS was a native of Ephesus, 500 years before Christ. We know little more of him than that he was a professed misanthrope; that he beheld with pity all the actions of men; that he constantly wept for their misery; and thence obtained the name of the crying philosopher.

DEMOCRITUS was a native of Abdera in Thrace, and lived in the time of Xerxes king of Persia. As a philosopher he was in high esteem. His desire of knowledge induced him to travel through the greater part of the then known world; and in these journeys he spent a very considerable fortune. He lived in perfect indifference about all the events and casualties of life, and used to laugh at the follies and vices of mankind; whence he obtained the appellation of the laughing philosopher. His residing chiefly among tombs and sepulchral monuments, inclined many to believe him disordered in his senses; and the inhabitants of Abdera entreated Hippocrates, the celebrated physician, to go and see him. Hippocrates accordingly paid him a visit; but, on discoursing with him, immediately discovered him to be a man of extraordinary knowledge

and sound understanding. He died 361 years before Christ, and is said to have attained the age of 109 years.

SIMONIDES, a native of Ceos in Greece, was a poet, and philosopher. He was the first inventor of what is called artificial memory. He chiefly distinguished himself by his elegiac verses. His answer to Hiero, king of Syracuse, who asked him, What is God? has often been recorded. Simonides at first desired one day to consider of the question; when that was elapsed, he required two days more; then four, and so on for a considerable time, always doubling the space he had last requested. Hiero, surprised at his behaviour, inquired the reason of it: Because, answered Simonides, the more I meditate on the subject, the more awful and incomprehensible I find it.

ROBINSON'S *Ancient History*.

AUGUST THE SEVENTH.

Fitness of Things to their Purposes.

EVERY part of Nature seems to pay its tribute to man, in the great variety of kinds or tribes, as well as the prodigious number of individuals of each various tribe, of all creatures. There are so many beasts, so many birds, so many insects, so many reptiles, so many trees, so many plants, upon the land; so many fishes, sea-plants, and other creatures, in the waters; so many minerals, metals, and fossils, in the subterraneous regions; that there is nothing wanting to the use of man, or any other creature of this lower world. The munificence of the Creator is such, that there is enough to supply the wants and conveniences of all creatures, in all places, all ages, and upon all occasions.

And this boundless variety is a most wise provision for the uses of this world in every age and in every place. God has created nothing in vain. Some things are for food, some for physic, some for habitation, some for utensils, some for tools and instruments of work, and some for recreation and pleasure, either to man, or to some of the inferior creatures themselves.

It is evident that all the creatures of God (beasts, birds, insects, and plants,) have, or may have, their several uses even among men. For although in one place things may lie neglected and out of use, yet in another place they may

be of great use. So what has been rejected in one age has been received in another; as the new discoveries in physic, and alterations of diet, sufficiently witness.

Or if there be many things of little immediate use to man, in this or any other age; yet to other creatures they may afford food or physic, or be of some necessary use. How many trees and plants, nay even the very carcasses of animals, the very dust of the earth, and the prodigious swarms of insects in the air and in the waters, of no apparent use to man, yet are food, or medicine, or places of retreat and habitation, to birds, fishes, reptiles, and insects themselves! for whose happy and comfortable subsistence the bountiful Creator has liberally provided, as well as for that of man. DERHAM.

AUGUST THE EIGHTH.

The Horse.

THE noblest conquest ever made by man is that of this spirited and haughty animal; which shares with him the fatigues of war, and the glory of the combat. Equally intrepid as his master, the horse sees the danger and braves it; inspired at the clash of arms, he loves it, he seeks it, and is animated with the same ardour. He also feels pleasure in the chase, in tournaments, in the course; he is all fire, but equally tractable as courageous; does not give way to his impetuosity, and knows how to check his inclinations: he not only submits to the arm which guides him, but even seems to consult the desires of his rider.

The horse is a creature which renounces his being, to exist only by the will of another; which he knows how to anticipate, and even express, and execute, by the promptitude and exactness of his movements: he feels as much as we desire, does only what we wish, giving himself up without reserve, and refuses nothing; makes use of all his strength, exerts himself beyond it, and even dies, the better to obey us.

Such is the horse, whose natural qualities art has improved. His education commences with the loss of his liberty, and by constraint it is finished. The slavery or servitude of these creatures is universal; and so ancient, that they are very rarely found in their natural state. They always bear about them tokens of servitude, and

frequently the cruel marks of labour and of pain: the mouth is deformed by the wrinkles occasioned by the bit, the flanks are scarred with wounds inflicted by the spur, the hoofs pierced by nails, and the attitude of the body is constrained from the impression of habitual shackles.

As all parts of Europe are at present peopled, and almost equally inhabited, wild horses are no longer found there; and those which are found in America were originally European tame horses, which have multiplied in the vast deserts of that country. The astonishment and fear which the inhabitants of Mexico and Peru expressed at the sight of horses and their riders, convinced the Spaniards that this animal was entirely unknown in those countries; they therefore carried thither a great number, which have now so multiplied that in many parts they darken the plains.

BUFFON.

AUGUST THE NINTH.

The Ass.

Why have we so much contempt for this animal, who is so good, so patient, so steady, and so useful? We bestow education on the horse, take care of him, instruct him, and exercise him; while the ass is abandoned to the care of the lowest servant, or exposed to the tricks of children; so that instead of improving, he must lose, by his education; and if there were not in him a fund of good qualities, he would certainly greatly degenerate by the manner in which he is treated.

He is naturally as humble, patient, and quiet, as the horse is proud, ardent, and impetuous: he suffers chastisement and blows with constancy and courage; he is moderate both as to the quantity and quality of his food; he is contented with the hardest and most disagreeable herbs, which the horse and other animals will leave with disdain. But he is very delicate with respect to his drink; for he will take none but the clearest water, and from rivulets with which he is acquainted.

In their earliest youth, asses are sprightly, and even handsome; but either from age or bad treatment, they soon become slow, indocile, and headstrong. Pliny tells us, that when the young one is taken from its mother, she will go through fire to recover it. The ass is also strongly attached to his master, notwithstanding he is usually ill-treated; he will smell him afar off, and can distinguish

him from all other men ; he also knows the places where he has lived, and the ways which he has frequented. His eyes are good, and his smell acute. His hearing is excellent ; which has contributed to his being numbered among timid animals. When he is overloaded, he shows his sense of the injury by lowering his head, and bending down his ears ; when he is greatly abused, he opens his mouth, and draws back his lips in a most disagreeable manner, which gives an air of derision and scorn ; if his eyes are covered, he remains motionless.

The ass walks, trots, and gallops, like the horse ; but all his motions are smaller, and much slower ; notwithstanding he can run with tolerable swiftness, he can gallop but a little way, and only for a small space of time ; and whatever pace he uses, if he is hard pressed, he is soon fatigued.

The ass is three or four years in growing, and lives twenty-five or thirty years. He sleeps less than the horse, and does not lie down to rest except when excessively tired.

BUFFON.

AUGUST THE TENTH.

Description of Mount Vesuvius.

MOUNT VESUVIUS is situated at the distance of five Italian miles from the city of Naples, and is justly accounted one of the most dreadful volcanoes, or burning mountains, in the world. Its declivity towards the sea is richly clothed with vines and fruit-trees ; the circumambient air is clear and salubrious, and the neighbouring plain affords a most delightful prospect : but the ascent to the summit is painfully tedious ; and after walking two miles over a kind of burnt earth mixed with calcined stones and cinders, the traveller arrives at a naked plain, from several parts of which issues a sulphurous smoke : and in the centre of it rises another hill, shaped like a sugar-loaf, and of more difficult access than the former.

At the summit of this hill is a vast mouth, or cavity, about four hundred yards in diameter at the top, but shelving down on all sides like a funnel ; whence proceeds a continual smoke, and sometimes those astonishing eruptions which fill the neighbouring villages with consternation. Each time it darts forth its flames, and pours out its liquid matter, the exterior form of the mountain, as well as its height, receives considerable alterations.

In ancient history we find accounts of the devastations occasioned by this volcano; and in latter ages we meet with instances of its raging with extraordinary fury. In the year 1694 there was a violent eruption; during which ashes and stones were thrown to the distance of nearly thirty miles. A prodigious quantity of melted minerals was likewise thrown out of the mouth, and ran slowly down the sides of the mountain; insomuch that great numbers of men were employed to cut trenches and channels to receive it, and prevent its spreading over the plains below.

In the summer of 1706 there happened another terrible eruption, attended with such a bellowing of the mountain as far exceeding the report of the largest artillery, and in the year 1717 it was judged that the flames and fiery stones were shot more than a thousand feet perpendicularly above the summit of the volcano.

In 1779 an eruption happened, which has been particularly described by Sir William Hamilton. This gentleman observed, that the lavas of Vesuvius constantly formed regular channels in the mountain. These channels, after small eruptions, were generally from two to six feet wide, and about eight in depth; and were often hidden from the sight by a quantity of scorix that had formed a kind of crust over them. Sir William walked in some of these subterraneous galleries, which appeared extremely curious; some being remarkably smooth and even on the top, sides, and bottom; and others incrustated with a kind of scorix, beautifully ramified with salts, in the form of icicles.

In the summer of 1794 another dreadful eruption took place at Vesuvius, which destroyed many of the adjacent villages, and was attended by many surprising phenomena. This eruption was preceded by a powerful shock of an earthquake, which extended over the whole of the Campagna Felice, and was felt at the distance of forty miles.

The lava, or liquid matter that runs from the mountain, on its cooling, forms solid masses, surpassing in hardness even marble; and tables, chimney-pieces, and even snuff-boxes, are made of it. With this matter the cities of Naples and Rome are paved, as also a great part of the ancient Roman highways.

CLARKE'S 100 WONDERS.

AUGUST THE ELEVENTH.

Animalcules.

THOSE creatures, the smallest with which we are acquainted, are called *animalcules of infusion*. They are thus named, because they are produced in infusions, and are such diminutive animals. For their production, nothing more is required, than to pour water on any animal or vegetable substance, and let this infusion stand four or five days in a moderately warm room, when a species of fermentation will take place in the liquor, a slimy skin will grow over it, and an immense multitude of these animalcules, visible only by means of the magnifying-glass, will be found in the fluid. They may be obtained from different vegetable substances; but from some more, from others less.

Of the numerous infusions, however, with which experiments have been made, none have afforded such multitudes as thyme. If you put as much thyme as may be taken up between the ends of the thumb and two fingers, into a wine glass, fill the glass with pure water, and let it stand for four days, you will be truly astonished when you look at a drop of it through the microscope. Millions of animalcules swim about, and the celerity of their motion is so great, that it makes the eye almost giddy.

The usual form of the animalcules, when at rest, appears to be spherical, or a little longish, or egg-shaped. When they are in motion, their bodies are more or less elongated, accordingly as they swim about with more or less celerity. Some are seen darting along with great swiftness, the figure of which is nearly linear, or resembling that of a small worm.

Nothing can be conceived more lively: the bustle of a nest of ants, or swarm of knats, is sluggishness to it. They dart in all directions, like an arrow from a bow, across the field of the microscope, in straight lines, when their bodies are drawn out greatly in length.— Sometimes they conceal themselves under the slime of the liquor, as if they were seeking their nutriment there: then they re-appear, swimming in various directions, and dexterously passing each other when they meet. Sometimes they draw their bodies up together in a spherical form, and then stretch them out again, in the same manner as a leech. Now they appear to dive down toward the bottom of the drop, as only their hinder parts

are visible: presently they spin round like a top, with incredible velocity. When one of these animalcules has entangled himself in a particle of slime, it is pleasing to see how he whirls himself round with it, in order to extricate himself.

It is equally pleasing to observe the motions which they frequently make with the head or pointed fore-end. When they give themselves a spring to dart forward, they frequently turn the head quickly on one side, as if they were biting at something, and swim forward with the head in this oblique direction.

Curious readers will ask, how big the largest of these animalcules may be? An idea of their size may be given by observing, that upwards of two hundred of the largest may be contained in the space occupied by one of the smallest grains of sand. A little mite is to one of these animalcules, much the same as a turkey is to a sparrow.

The longevity of these animalcules cannot easily be ascertained. Those that we contemplate under the microscope do not die a natural death, but are destroyed by the evaporation of the fluid, which leaves thousands of their dead bodies on the glass side, in the shape of a little scarcely perceptible dust. It is observable, that, in an infusion, which has stood a week or more, they become smaller, and at length seem to disappear. Whether, however, these smaller animalcules are the same, which have gradually diminished in size, or whether they are a more diminutive species, which at last alone remains, cannot be ascertained.

MAVOR'S *Nat. Hist.*

AUGUST THE TWELFTH.

Importance of Virtue. (A Sunday Lesson.)

VIRTUE is of intrinsic value and good desert, and of indispensable obligation; not the creature of will, but necessary and immutable; not local or temporary, but of equal extent and antiquity with the Divine Mind; not a mode of sensation, but everlasting truth; not dependent on power, but the guide of all power.

Virtue is the foundation of honour and esteem, and the source of all beauty, order, and happiness, in Nature. It is what confers value on all the other endowments and qualities of a reasonable being; to which they ought to be ab-

solutely subservient; and without which, the more eminent they are, the more hideous deformities and the greater curses they become.

Many of the endowments and talents we now possess, and of which we are too apt to be proud, will cease entirely with the present state; but virtue will be our ornament and dignity in every future state to which we may be removed. Beauty and wit will die, learning will vanish away, and all the arts of life be soon forgotten; but virtue will remain for ever. This unites us to the whole rational creation, and fits us for conversing with any order of superior natures, and for a place in any part of God's works.

Virtue procures us the love of all wise and good beings, and renders them our allies and friends. But what is of unspeakably greater consequence is, that it makes God our friend, assimilates and unites our mind to his, and engages his almighty power in our defence.

Superior beings of all ranks are bound by virtue no less than ourselves. It has the same authority in all worlds that it has in this. The further any being is advanced in excellence and perfection, the greater is his attachment to it, and the more he is under its influence. It is the law of the whole universe; it stands first in the estimation of the Deity; its origin is His nature; and it is the very object that makes him lovely.

Such is the importance of virtue. Of how much consequence it is, therefore, to practise it! There is no argument or motive that is at all fitted to influence a reasonable mind, which does not call us to this. One virtuous disposition of soul is preferable to the greatest natural accomplishments and abilities, and of more value than all the treasures of the world.

PRICE.

AUGUST THE THIRTEENTH.

On the Manufacture of Paper.

THE beautiful, delicate, and valuable substance called paper is manufactured from the meanest materials; from the old rags which have passed from one poor person to another, and at length have perhaps dropped in tatters. They are still, however, useful, and ought always to be carefully preserved, and sold to the rag-gatherer, who sells them again at the paper-mill.

The paper-maker gives them first to women to sort ac-

according to their different degrees of fineness; who also carefully cut out all the seams, which they throw into a basket for other purposes: they then put them into the dusting-engine, a large circular wire-sieve from which they receive some degree of cleaning.

The rags are next conveyed into a large trough, or cistern, into which a pipe of clear spring water is constantly flowing. In this cistern is placed a cylinder about two feet long, set thickly round with rows of iron spikes, standing as near as they can to one another without touching: at the bottom of the trough are corresponding rows of spikes. The cylinder is made to whirl round with inconceivable rapidity, and thus these iron teeth tear the cloth in every possible direction: till, by the assistance of the water which continually flows through the cistern, it is reduced to a fine pulp; and by the same process all its impurities are cleansed away, and it is restored to its original whiteness. This process takes about six hours.

This fine pulp they next put into a copper of warm water. It is already the substance of paper, and the form must now be given to it: for this purpose they use a mould made of wire, strong one way and crossed with finer. This mould they just dip horizontally into the copper, and take it out again. It has a little wooden frame on the edge, by means of which it retains as much of the pulp as is wanted for the thickness of a sheet, and the superfluity runs off through the interstices of the wires.

Another workman receives it, opens the frame, and turns out the thin sheet (which has now shape, but not consistence,) upon soft felt placed on the ground ready to receive it: on that are placed another piece of felt, and then another sheet of paper, and so on till they have made a pile of forty or fifty. They are then pressed with a large screw-press, which, forcibly squeezing the water out, immediately gives them consistence.

Much, however, still remains to be done. The felts are removed, and the paper dexterously taken up with an instrument in the form of a T, three sheets at a time, and hung on lines to dry. After hanging a week or ten days, any knots or roughness it may still have, are carefully picked off, and it is then sized.

Size is a kind of glue; and without the application of this substance the paper would not bear ink, but would run and blot, as is the case on common red paper. The sheets are then hung up to dry, and when dry taken to the finishing-room, where they are examined again, pressed

in dry presses, (which give them their gloss and smoothness,) counted into reams, and sent to the stationer; from whom we have it after he has again folded it, and cut the edges. The whole process of making paper takes about three weeks.

AUGUST THE FOURTEENTH.

Alexander the Great

ALEXANDER, son of Philip king of Macedon, was born at Pella, a town of that kingdom, 365 years before the Christian æra. From his infancy he on several occasions gave proofs of an extraordinary loftiness of sentiment and character. Being one day asked whether he would not contend in the foot races at the Olympic games, he answered that he would if kings were to be his competitors.

On receiving the news of a city being taken, or a battle won, by his father, he used to appear melancholy and disconsolate, and exclaim to his friends, Alas! my father will accomplish every thing, and leave nothing for me to do.

In every branch of learning that it was thought necessary to teach him, he made an astonishing progress. His tutor was the celebrated Aristotle; and the young prince Alexander conceived as high an esteem for that illustrious philosopher, as Philip already entertained for him. He even honoured him as a parent; saying that his natural father had given him existence, but that his second father had taught him how to make a proper use of his existence. Under such a master the genius of Alexander made a rapid advancement, and he soon imbibed the principles of the whole circle of philosophy. He also took great delight in the conversation of men of learning; an admirable source of instruction to a young prince.

He became at a very early age the most expert horseman in his father's court; and was the only person who dared to ride the famous Bucephalus, a very fine horse sent as a present to Philip, but so fiery and intractable that they despaired of making him serviceable. It is said that this horse would afterwards suffer no person but Alexander to mount him; that he always knelt down to receive him on his back; and that after being mortally wounded in the battle against Porus, he saved the life of

Alexander by carrying him through the host of enemies that surrounded him, and then expired. Alexander shed tears at his death; and in memory of him, built on the banks of the Hydaspes, a city which he named Bucephalia.

Alexander ascended the throne of Macedonia at the age of twenty years. After performing the ceremonies of his father's funeral, he bent his attention to secure the conquests of Philip over the neighbouring nations, and to extend his own.

His behaviour after the battle of Issus to the wife and daughters of Darius, the Persian monarch, who became his prisoners, was the action of his life that gained him the most lasting honour. Those unfortunate princesses found in his camp a treatment consistent with their dignity, and a safe asylum for their honour and virtue.

But the latter part of the life of Alexander exhibits an important lesson to mankind in general. His sudden transitions from good to bad, from prudence to folly, from moderation to violence, from glory to ignominy, must make every rational being tremble upon the brink of the abyss dug by the passions. Yielding to the dictates of an ungoverned ambition, he became the scourge of mankind, and the pest of the world.

Having conquered the vast empire of Persia, ranged over all the East, and made even the Indies provinces of his empire, he died at Babylon, in the 33d year of his age; some historians say by poison, others by drinking.

ROBINSON'S *Ancient History*.

AUGUST THE FIFTEENTH.

On the Vice of Lying.

To warn us from lying, we should do well to consider the folly, the meanness, and the wickedness of it.

The folly of lying consists in its defeating its own purpose. A habit of lying is generally detected in the end; and after detection, the liar, instead of deceiving, will not even be believed when he happens to speak the truth. — Nay, every single lie is attended with such a variety of circumstances which lead to a detection, that it is often discovered. The use generally made of a lie is to cover a fault; but as this end is seldom answered, we only aggravate what we wish to conceal. In point even of prudence, an honest confession would serve us better.

The meanness of lying arises from the cowardice which it implies. We dare not boldly and nobly speak the truth, but have recourse to low subterfuges; which always show a sordid and disingenuous mind. Hence it is, that in the fashionable world the word *liar* is always considered as a term of peculiar reproach.

The wickedness of lying consists in its perverting one of the greatest blessings of God, the use of speech, in making that a mischief to mankind which was intended for a benefit. Truth is the greatest bond of society. If one man lies, why may not another? And if there is no mutual trust, there is an end of all intercourse.

An equivocation is nearly related to a lie. It is an intention to deceive under words of a double meaning, or words which, literally speaking, are true; and is equally criminal with the most downwright breach of truth. A nod, or sign, may convey a lie as effectually as the most deceitful language.

Under the head of lying may be mentioned a breach of promise. Every engagement, though only of the lightest kind, should be punctually observed: and he who does not think himself bound by such an obligation, has little pretension to the character of an honest man. GILPIN

AUGUST THE SIXTEENTH

Of the Relation of Sleep to Night.

ANIMAL existence is made up of action and slumber: Nature has provided a season for each. An animal which stood not in need of rest, could always live in day-light. An animal which, though made for action, and delighting in action, must have its strength repaired by sleep, meets, by its constitution, the returns of day and night. In the human species, for instance, were the bustle, the labour, the motion of life upheld by the constant presence of light, sleep could not be enjoyed without being disturbed by noise, and without expense of that time which the eagerness of private interest would not contentedly resign. It is happy, therefore, for us, that Nature, by the very disposition of her elements, has commanded, as it were, and imposed upon us, at moderate intervals, a general intermission of our toils, our occupations, and pursuits.

But it is not for man, either solely or principally, that night is made. Inferior but less perverted natures taste

its solace, and expect its return, with greater exactness and advantage than he does. Who can observe without admiration the satisfaction and regularity with which the greatest part of the irrational world yield to this soft necessity, this grateful vicissitude? how comfortably the birds of the air, for example, address themselves to the repose of the evening; with what alertness they resume the activity of the day.

Nor does it disturb this argument to confess, that certain species of animals are in motion during the night, and at rest in the day. The fact is, that the repose of other animals sets these at liberty, and invites them to their food or their sport.

The constitution of animals susceptible of torpor, bears a relation to winter similar to that which sleep bears to night. Against not only the cold, but the want of food, which the approach of winter induces, the Preserver of the world has provided in many animals by migration, in many others by torpor. As one example out of a thousand; the bat, if it did not sleep through the winter, must have starved, as the moths and flying insects upon which it feeds disappear.

PALEY.

AUGUST THE SEVENTEENTH.

Adaptation of animated Bodies to inanimate Nature.

THE bodies of animals hold, in their constitution and properties, a great and important relation to the elements by which they are surrounded. The wings of birds bear a relation to air, and the fins of fishes to water.

Throughout the universe there is a wonderful proportioning of one thing to another. The size of animals, of man especially, when considered with respect to other animals, or to the plants which grow around him, is such as a regard to his conveniency would have pointed out. A giant or a pigmy could not have milked goats, reaped corn, or mowed grass; a giant could not have rode a horse, trained a vine, or shorn a sheep, with the same bodily ease as we do, if at all. A pigmy would have been lost amongst rushes, or carried off by birds of prey.

It may be observed, likewise, that the model and the materials of the human body being what they are, a much greater bulk would have broken down by its own weight. The persons of men who much exceed the ordinary stature betray this tendency.

How close is the suitableness of the earth and sea to their several inhabitants; and of these inhabitants, to the places of their appointed residence!

Take the earth as it is; and consider the correspondency of the powers of its inhabitants; with the properties and condition of the soil which they tread. Take the inhabitants as they are; and consider the substances which the earth yields for their use. They can open its surface; and its surface supplies all which they want. Such is the length of their faculties, and such the constitution of the globe, that this is sufficient for all their occasions.

When we pass from the earth to the sea, from land to water, we pass through a great change; but an adequate change accompanies us of animal forms and functions, of animal capacities and wants. The earth in its nature is very different from the sea, and the sea from the earth; but one accords with its inhabitants as exactly as the other: and the correspondency instituted by Divine Wisdom pervades and harmonises the whole. PALFY.

AUGUST THE EIGHTEENTH.

Mount Ætna.

THIS volcano was called the Pillar of Heaven by Pindar, who flourished four hundred and thirty-five years before the Christian æra. Its astonishing height is such, that Vesuvius, if placed beside it, would appear but a small hill. The enormous mass is surrounded by smaller mountains; and while the lava of Vesuvius may issue its stream for seven miles, Ætna will emit a torrent of liquid fire thirty miles in length.

All travellers agree, that this mountain affords an epitome of the different climates throughout the world. Towards the base it is extremely hot; further up, more temperate; and grows gradually colder, till at length the traveller perceives that its head is enveloped in a mantle of eternal snow.

In the middle, at the top, stands the great mouth of the volcano, which is a little mountain about a quarter of a mile perpendicular, situated in the centre of a gently inclining plain. In the middle of this little mountain is a large hollow, the inside of which is incrustated with salts and sulphur of different colours. In the midst of this funnel is the terrific gulf whence continually issues smoke

accompanied by terrible and confused noises, which, during the time of an eruption, may be heard at a prodigious distance.

The great eruption of this volcano in the year 1669 broke out on the eleventh of March, two hours before midnight, on the south-east side of the mountain, about twenty miles from the old mouth, and ten from the city of Catania. The matter thrown out was a stream of metals and minerals, which ran for fifteen or twenty days together into the sea, close to the walls of Catania. In its course it overwhelmed fourteen towns and villages, and during the whole time of this eruption, which was fifty-four days, neither sun nor stars could be seen in the neighbouring country.

AUGUST THE NINETEENTH.

Advantages of Public Worship. (A Sunday Lesson.)

INDEPENDENT of the peculiar object of public religious assemblies, many collateral advantages are derived from them, which the liberal thinker will by no means despise. The recurrence of appointed days of rest and leisure, which, but for this purpose, would never have been appointed, divides the weary months of labour and servitude with a separating line of a brighter colour. The church is a centre of union for neighbours, friends, and townsmen; and it is a reasonable and pleasing ground of preference in our attachments, that we have "walked to the house of God in company." Even the common greetings that pass between those who meet there, are hallowed by the occasion of the meeting, and the spirit of civic urbanity is mingled with a still sweeter infusion of Christian courtesy.

By the recurrence of this intercourse, feuds and animosities are composed, which interrupted the harmony of friends and acquaintance; and those who avoided to meet because they could not forgive, are led to forgive, being obliged to meet. Its effect in humanising the lower orders of society, and fashioning their manners to the order and decorum of civil life, is apparent to every reflecting mind. The poor who have not formed a habit of attending here, remain from week to week in their sordid cells, or issue thence to places of licentiousness more sordid; while those who assemble with the other inhabitants of the place, are brought into the frequent view of their superiors; their

persons are known, their appearance is noted; the inquiring eye of benevolence pursues them to their humble cottages, and they are not unfrequently led home from social worship to the social meal. If the rich and poor were but thus brought together regularly and universally, that single circumstance would be found sufficient to remove the squalidness of misery, and the bitterness of want; and poverty would exist only as a sober shade in the picture of life, on which the benevolent eye might rest with a degree of complacency, when fatigued with the more gaudy colouring of luxury and show.

BARBAULD.

AUGUST THE TWENTIETH.

The Copernican System described.

THE SUN revolving on his axis turns,
And with creative fire intensely burns;
Impell'd the forcive air, our Earth supreme
Rolls with the planets round the solar gleam.

First MERCURY completes his transient year,
Glowing refulgent with reflected glare.

Bright VENUS occupies a wider way,
The early harbinger of night and day.

More distant still our GLOBE terraqueous turns,
Nor chills intense, nor fiercely heated burns:

Around her rolls the LUNAR ORB of light,
Trailing her silver glories through the night.

On the Earth's orbit see the various signs;

Mark where the Sun, our year completing, shines:

First the bright *Ram* his languid ray improves;

Next glaring wat'ry through the *Bull* he moves:

The am'rous *Twins* admit his genial ray:

Now burning, through the *Crab* he takes his way;

The *Lion*, flaming, bears the solar power;

The *Virgin* faints beneath the sultry shower.

Now the *Just Balance* weighs his equal force;

The slimy *Serpent* swelters in his course:

The fabled *Archer* clouds his languid face;

The *Goat* with tempests urges on his race;

Now in the *Water* his faint beams appear,

And the cold *Fishes* end the circling year.

Beyond our globe the sanguine MARS displays
A strong reflection of primeval rays.

Next belted JUPITER far distant gleams,
Scarcely enlightened with the solar beams ;
With four unfix'd receptacles of light,
He towers majestic through the spacious height.
But further yet the tardy SATURN lags,
And five attendant luminaries drags,
Investing with a double ring his pace,
He circles through immensity of space.
These are thy wond'rous works, First Source of Good !
Now more admir'd in being understood.* CHATTERTON.

AUGUST THE TWENTY-FIRST.

Comparative View of the Ancients and Moderns.

WHATEVER superiority the ancients may have had in point of genius, yet in all arts where the natural progress of knowledge has had room to produce any considerable effects, the moderns cannot but have some advantage.

In natural philosophy, astronomy, chemistry, and other sciences, that depend on an extensive knowledge and observation of facts, modern philosophers have an unquestionable superiority over the ancient. I am inclined also to think, that in matters of pure reasoning there is more precision among the moderns than in some instances there was among the ancients ; owing, perhaps, to a more extensive literary intercourse, which has improved and sharpened the faculties of men.

In some studies, too, that relate to taste and fine writing, the progress of society must be admitted to have given us some advantages. For instance, in history, there is certainly more political knowledge in several European nations at present than there was in ancient Greece and Rome. We are better acquainted with the nature of government, because we have seen it under greater variety of forms and revolutions. The world is more laid open than it was in former times ; commerce is greatly enlarged ; more countries are civilised ; posts are every where established ; intercourse has become more easy, and the knowledge of facts consequently more attainable. All these are great

* Since these verses were written, four other planets have been discovered belonging to our system ; namely, three between Mars and Jupiter, named CERES, PALLAS, and JUNO ; and one still further than Saturn, named HERSCHEL.

320 *Of the Natural and Artificial Divisions of Time.*

advantages to historians; of which in some measure they have availed themselves.

In the more complex kinds of poetry, likewise, we may have gained somewhat perhaps in point of regularity and accuracy. In dramatic performances, having the advantage of the ancient models, we may be allowed to have made some improvements in the variety of the characters, the conduct of the plot, and attention to probability and to decorum.

These seem to be the chief points of superiority which we can plead above the ancients. Neither do they extend so far as might be imagined at first view: for it may be said, that if the advancing age of the world bring along with it more science and more refinement, there belong, however, to its earlier periods, more vigour, more fire, and more enthusiasm of genius. This appears, indeed, to form the characteristic difference between the ancient poets, orators, and historians, compared with the moderns. Among the ancients we find higher conceptions and greater simplicity: among the moderns, more art and correctness.

But though this be in general a mark of distinction between the ancients and moderns, yet, like all general observations, it must be understood with some exceptions; for, in point of poetical fire and original genius, Milton and Shakspeare are inferior to no poets in any age.

HUGH BLAIR.

AUGUST THE TWENTY-SECOND.

Of the Natural and Artificial Divisions of Time.

TIME is in a perpetual flow, and perishing; but a representation of it is preserved in the space described by motion. As the Sun, therefore, is the most conspicuous body in our system, and appears to move regularly through the Heavens, his motion is naturally fixed upon as one of the properest measures of time which are afforded by Nature.

It is by means of his apparent diurnal and annual revolutions that we obtain the two grand divisions of time into days and years: and thence all the different periods which are at present in use. The first division of the day was simply into four parts; morning, noon, evening, and midnight: but as these measures are vague and uncertain, art has been called in to our assistance, and has furnished

us with instruments by which we are enabled to measure small intervals of time with greater precision.

The Sun appears to go round the Earth in twenty-four hours, and the fixed stars in twenty-three hours fifty-six minutes and four seconds; so that they are found to gain three minutes and fifty-six seconds upon the Sun every day, which amounts to one diurnal revolution in a year; and, therefore, in three hundred and sixty-five days, as measured by the Sun, there are three hundred and sixty-six days as measured by the stars; the former of which are called solar days, and the latter sidereal.

This regular return of the fixed stars to the meridian, affords us an easy method of determining whether our clocks and watches keep true time. For if through a small hole in a window-shutter, or in a thin plate of metal fixed for that purpose, it be observed at what time any star disappears behind a chimney or the corner of a building, at a small distance; then if the star disappears the next night three minutes and fifty-six seconds sooner by the clock or watch than it did the night before, on the second night seven minutes fifty-two seconds sooner, and so on, it is a certain sign the machine goes right: but if it does not observe this rule, it is evidently not accurate; and as the disappearing of a star is instantaneous, we may depend upon this information to half a second at most.

BONNYCASTLE.

AUGUST THE TWENTY-THIRD.

Use of Time — Punctuality — and Dispatch.

VERY few persons are good economists of their fortune, and still fewer of their time; and yet of the two the latter is the more precious. Young people are apt to think they have so much time before them, that they may squander what they please of it, and yet have enough left: as the possession of very great fortunes has frequently seduced people to a ruinous profusion — fatal mistakes, always repented of, but always too late.

“Time is every man’s estate.”

I would earnestly recommend the care of those minutes and quarters of hours, in the course of the day, which people sometimes think too short to deserve their attention: and yet, if summed up at the end of the year, would amount to a very considerable portion of time.

Many people lose a great deal of their time by laziness they loll and yawn in a great chair, telling themselves that they have not time to begin any thing then, and that it will do as well another time. This is a most unfortunate disposition, and the greatest obstruction to both knowledge and business. Young persons have no right nor claim to laziness: being but just listed in the service of the world, they must be active, diligent, and indefatigable. Never put off till to-morrow what you can do to-day.

One method I will recommend to you, by which I have found great benefit in every part of my life: that is, to rise early; and at the same hour every morning, how late soever you may have sat up the night before. This secures you an hour or two, at least, before the common interruptions of the morning begin.

Our lives, says Seneca, are spent either in doing nothing at all, or in doing nothing to the purpose, or in doing nothing that we ought to do. We are always complaining that our days are few, yet acting as though there would be no end of them: and though we, in general, seem grieved at the shortness of life, we are wishing every period of it at an end. The youth longs to be of age, then to be a man of business, then to make up an estate, then to arrive at honours, then to retire. ENFIELD.

AUGUST THE TWENTY-FOURTH.

The Loadstone.

THE loadstone is the most singular of all minerals in its properties. It is a stone of a dark grey colour, and has the virtue of attracting iron. This virtue is not equal throughout the whole stone, but resides chiefly in two of its points, called the poles of the loadstone.

When this stone is suspended by a string, and unconfin'd, it constantly points one of its ends to the north, and the other to the south, if first put in motion, and then left to itself. This regular direction, which only varies a little in some particular parts of the earth, has given the name of the *north pole* to that end of the stone which points to the north, and *south pole* to that which points to the south.

The two properties of attracting iron, and pointing towards the north, are communicated to iron by rubbing it against the loadstone. This discovery introduced the

magnetic needle, so indispensably necessary to navigators in long voyages.

These virtues in the loadstone have prompted naturalists to examine it further, with the hope not only of finding the cause of such surprising effects, but also of discovering new properties in the stone. They were more fortunate in the latter respect than in the former. It was observed that the loadstone does not at all times, and in all places, point directly to the north; but that it sometimes inclines a little to the east, and sometimes to the west, more or less. It was remarked, that its attractive powers were always equally strong, though some bodies were placed between the iron and the stone, which might be supposed to prevent the effect; as glass, fire, water, men, and animals, with every metal except iron. It was discovered, that in two loadstones, the two poles of the same (the northern and southern) repulsed, and seemed to fly from each other. It was therefore concluded, that the power of attraction might be in the iron as well as in the loadstone, as they seemed to attract each other equally.

In order to be convinced of the truth of this experiment, it is only necessary to hang a loadstone on one end of the beam of a balance, and put an equal weight at the other end: and when the loadstone is balanced, and not in motion, to place a piece of iron under it: the loadstone will be immediately drawn down by the iron, and the other weight will fly up. If their situation be reversed, the loadstone will attract the iron in the same manner.

AUGUST THE TWENTY-FIFTH.

The Salt-mine near Cracow.

At Wielitska, a small town about eight miles from Cracow, this wonderful mine is excavated in a ridge of hills, at the northern extremity of the chain which joins to the Carpathian mountains; and has been worked above six hundred years.

There are eight openings or descents into this mine, six in the fields, and two in the town itself. The openings are lined throughout with timber: and at the top of each there is a large wheel, with a rope as thick as a cable, by which things are let down, and the salt is drawn up.

The descent is very slow and gradual, down a narrow

dark well, to the depth of six hundred feet perpendicular. The place where the stranger is set down is perfectly dark; but the miners striking fire, and lighting a small lamp, conduct him through a number of passages, and by means of ladders, they again descend to an immense depth: at the foot of the last ladder the stranger is received in a small dark cavern; and in the course of their descent it is usual for the guide to pretend the utmost dread and apprehension of the feeble light of his lamp going out, often declaring that such an accident might be attended with the most fatal consequences.

When arrived at this dreary chamber, the miner contrives to extinguish his lamp as if by accident, and, catching the stranger by the hand, drags him through a narrow creek into the body of the mine; when there bursts upon his view a little world, the beauty of which is scarcely to be imagined. He beholds a spacious plain, containing a kind of subterranean city, with houses, carriages, roads, &c. all scooped out of one vast rock of salt, as bright and glittering as crystal; while the blaze of the lights continually burning for the general use, reflected from the dazzling columns which support the lofty arched vaults of the mine, and which are beautifully tinged with all the colours of the rainbow, and sparkle with the lustre of precious stones, affords a more splendid and glittering prospect than any thing above ground can possibly exhibit.

In various parts of this spacious plain stands the huts of the miners and their families, some single and others in clusters like villages. They have very little communication with the world above ground; and many hundreds of persons are born and pass the whole of their lives here.

Through the midst of this plain lies a road, which is always filled with carriages laden with masses of salt from the furthest part of the mine. The drivers are generally singing, and the salt looks like a load of gems. A great number of horses are kept in the mine; and when once let down, never see day-light again.

The instruments principally used by the miners are pick-axes, hammers, and chisels; with which they dig out the salt in the form of huge cylinders, each of many hundred weight. This is found the most convenient method of getting it out of the mine; and as soon as got above ground, the masses are broken into smaller pieces, and sent to the mills, where they are reduced to powder. The finest sort of salt is sometimes cut into toys, and often passes for real crystal.

This mine appears to be inexhaustible. Its known breadth is one thousand one hundred and fifteen feet, its length is six thousand six hundred and ninety-one feet, and its depth seven hundred and forty-three feet. This, however, is to be understood only of the part which has been actually worked; as the real depth or longitudinal extent of the bed of salt it is not possible to conjecture.

AUGUST THE TWENTY-SIXTH.

On Natural Philosophy. (A Sunday Lesson.)

NATURAL Philosophy, in the largest sense of the expression, is too wide a field for you to undertake: but, the study of Nature, as far as may suit your powers and opportunities, you will find a most sublime entertainment: the objects of this study are all the stupendous works of the Almighty hand, that lie within the reach of our observation. In the works of man perfection is aimed at, but it can only be found in those of the Creator. The contemplation of perfection must produce delight, and every natural object around you would offer this delight, if it could attract your attention.

If you survey the earth, every leaf that trembles in the breeze, every blade of grass beneath your feet, is a wonder as absolutely beyond the reach of human art to imitate, as the construction of the universe. Endless pleasures to those who have a taste for them, might be derived from the endless variety to be found in the composition of this globe and its inhabitants. The fossil—the vegetable—and the animal world—gradually rising in the scale of excellence—the innumerable species of each, still preserving their specific differences from age to age, yet of which no two individuals are ever perfectly alike—afford such a range for observation and inquiry as might engross the whole term of our short life if followed minutely.

Besides all the animal creation obvious to our unassisted senses, the eye, aided by philosophical inventions, sees myriads of creatures, which by the ignorant are not known to have existence: it sees all Nature teem with life; every fluid—each part of every vegetable and animal—swarm with its peculiar inhabitants—invisible to the naked eye, but as perfect in all their parts, and enjoying life as indisputably as the elephant or the whale.

But, if from the earth, and from these minute wonders,

the philosophic eye is raised towards the Heavens, what a stupendous scene there opens to its view! — those brilliant lights that sparkle to the eye of ignorance as genis adorning the sky, or as lamps to guide the traveller by night, assume an importance that amazes the understanding! — they appear to be *worlds*, formed like ours for a variety of inhabitants — or *suns*, enlightening numberless other worlds too distant for our discovery! I shall ever remember the astonishment and rapture with which my mind received this idea, when I was about your age; it was then perfectly new to me, and it is impossible to describe the sensations I felt, from the glorious, boundless prospect of infinite beneficence bursting at once upon my imagination!

Who can contemplate such a scene unmoved? — if your curiosity is excited to enter upon this noble inquiry, a few books on the subject, and those of the easiest sort, with some of the common experiments, may be sufficient for your purpose — which is to enlarge your mind, and to excite in it the most ardent gratitude and profound adoration towards that great and good Being, who exerts his boundless power in communicating various portions of happiness through all the immense regions of creation.

BLAIR'S *Nat. Philosophy*.

AUGUST THE TWENTY-SEVENTH.

Day and Night, and the Seasons.

NATURE is always grand in her designs, but frugal in her execution of them: sublimity and simplicity are the striking characteristics of her workmanship. From a few simple principles she produces the most astonishing effects, and charms us no less by the infinite diversity of her operations, than by the skill and contrivance which are manifested in the performance of them.

The sun, moon, planets, and fixed stars, are all governed by the same invariable laws: the single principle of gravitation pervades the whole universe, and puts every spring and wheel of it in motion. From the indiscernible atoms, to the vast and immeasurable luminaries of Heaven, every thing is subject to its dominating influence; and from this active, invisible, and invigorating agent, proceed that order, harmony, beauty, and variety, which so eminently distinguish the works of creation.

But of all the effects resulting from this admirable scene of things, nothing can be more pleasing and agreeable to

a philosophic mind, than the alternate succession of day and night, and the regular return of the seasons :—

“ Sweet as the breath of morn, and sweet
The coming on of grateful evening mild.”

When the Sun first appears in the horizon, all Nature is animated by his presence : the magnificent theatre of the universe opens gradually to our view, and every object round us excites ideas of pleasure, admiration, and wonder. After riding in all his brightness through the vault of Heaven, he is again hidden from our sight ; and we are now presented with a new spectacle of equal grandeur and sublimity. The Heavens are on a sudden covered with innumerable stars ; the Moon, rising in clouded majesty, unveils her peerless light ; whilst the silent solemnity of the scene fills the mind with sentiments and ideas beyond the power of language to express.

Variety is the source of every pleasure : and the bountiful Author of Nature, in the magnificent display of his wisdom and power, has afforded us every possible means of entertainment and instruction. What a pleasing succession of scenes results from the gradual vicissitude of the seasons ! Summer, winter, spring, and autumn, lead us insensibly through the varied circle of the year ; and are no less pleasing to the mind, than necessary towards bringing to maturity the various productions of the earth. Whether the Sun flames on the tropic, or pours his mild effulgence from the equator, we equally rejoice in his presence, and adore that omniscient Being who gave him his appointed course, and prescribed the bounds which he can never pass.

BONNYCASTLE.

AUGUST THE TWENTY-EIGHTH.

The Designs of Providence.

THE Universe may be considered as the palace in which the Deity resides, and this Earth as one of its apartments. Those great outlines of Nature to which art cannot reach, and where our greatest efforts must have been ineffectual, God himself has finished with amazing grandeur and beauty. Our beneficent Father has considered these parts of Nature as peculiarly his own ; as parts which no creature could have skill or strength to amend ; and therefore made them incapable of alteration, or of more perfect regularity. The heavens and the firmament show the

wisdom and the glory of the Workman. Astronomers, who are best skilled in the symmetry of systems, find nothing there that they can alter for the better. God made these perfect, because no subordinate being could correct their defects, if they had any.

When therefore we survey Nature, nothing can be more splendid, more correct, or more amazing. We behold a Deity residing in the midst of an universe infinitely extended every way, animating all, and cheering the vacuity with his presence. We behold an immense and shapeless mass of matter formed into worlds by his power, and dispersed at intervals through which even the imagination cannot travel. In this great theatre of his glory, a thousand suns, like our own, animate their respective systems, appearing and vanishing at the Divine command. We behold our own bright luminary fixed in the centre of its system, wheeling its planets in times proportioned to their distances and at once dispensing light, heat, and motion.

The Earth also is seen with its twofold motion, producing by the one the change of seasons, and by the other the grateful vicissitudes of day and night. With what silent magnificence is all this performed! with what seeming ease! The works of art are exerted with an interrupted force, and their noisy progress discovers the obstructions which they receive: but the Earth, with a silent steady rotation, successively presents every part of its surface to the Sun; at once imbibing nourishment and light from that parent of vegetation and felicity.

Not only are heat and light thus supplied, but its whole surface is covered with a transparent atmosphere that turns with its motion, and guards it from external injury. The rays of the Sun are broken into a genial warmth: and while the surface is assisted, a gentle heat is produced in the bowels of the earth, which contributes to cover it with verdure. Waters also are supplied in healthful abundance, to support animal life and assist vegetation. Mountains arise to diversify the prospect, and give a current to the stream. Seas extend from one continent to the other, replenished with animals that may be applied to human support; and also serving to enrich the earth with a sufficiency of vapour. Breezes fly along the surface of the fields, to promote health and vegetation. The coolness of the evening invites to rest, and the freshness of the morning invigorates for labour.

AUGUST THE TWENTY-NINTH

On Cleanliness.

CLEANLINESS may be recommended under the three following heads: as it is a mark of politeness; as it produces affection; and as it bears analogy to purity of mind.

First, it is a mark of *politeness*; for it is universally agreed upon, that no one unadorned with this virtue can go into company without giving a manifest offence. The different nations of the world are as much distinguished by their cleanliness, as by their arts and sciences. The more they are advanced in civilisation, the more they consult this part of politeness.

Secondly, Cleanliness may be said to be the foster-mother of *affection*. Beauty commonly produces love, but cleanliness preserves it. Age itself is not unamiable, while it is preserved clean and unsullied: like a piece of metal constantly kept smooth and bright, we look on it with more pleasure than on a new vessel that is cankered with rust.

I might further observe, that as cleanliness renders us agreeable to others, it makes us easy to ourselves; that it is an excellent preservative of health; and that several vices destructive both to mind and body, are inconsistent with the habit of it.

In the third place, it bears a great analogy with *purity of mind*, and naturally inspires refined sentiments and passions. We find from experience, that through the prevalence of custom the most vicious actions lose their horror, by being made familiar to us. On the contrary, those who live in the neighbourhood of good examples, fly from the first appearance of what is shocking; and thus pure and unsullied thoughts are naturally suggested to the mind by those objects that perpetually encompass us, when they are beautiful and elegant in their kind.

In the East, where the warmth of the climates makes cleanliness more immediately necessary than in colder countries, it is a part of religion; the Jewish law (as well as the Mahometan, which in some things copies after it) is filled with bathings, purifications, and other rites of the like nature: and we read several injunctions of this kind in the book of Deuteronomy.

ADDISON.

AUGUST THE THIRTIETH.

On the Order of Nature.

SEE, through this air, this ocean, and this earth,
 All matter quick, and bursting into birth.
 Above, how high progressive life may go ;
 Around, how wide ! how deep extend below !
 Vast chain of being ! which from God began
 Nature ethereal, human ; angel, man
 Beast, bird, fish, insect, which no eye can see,
 No glass can reach ; from infinite to thee,
 From thee to nothing. On superior powers
 Were we to press, inferior might on ours ;
 Or in the full creation leave a void,
 Where, one step broken, the great scale's destroy'd.
 From Nature's chain whatever link you strike,
 Tenth or ten thousandth, breaks the chain alike.

And if each system in gradation roll,
 Alike essential to th' amazing whole,
 The least confusion but in one, not all
 That system only, but the whole, must fall.
 Let Earth, unbalanc'd from her orbit fly,
 Planets and suns run lawless through the sky ;
 Let ruling angels from their spheres be hurl'd,
 Being on being wreck'd, and world on world ;
 Heav'n's whole foundations to the centre nod,
 And Nature tremble to the throne of God ;
 All this dread order break, for whom ? for thee,
 Vile worm ? Oh, madness ! pride ! impiety !

What if the foot, ordain'd the dust to tread,
 Or hand to toil, aspir'd to be the head ?
 What if the head, the eye, or ear, repin'd
 To serve mere engines to the ruling mind ?
 Just as absurd for any part to claim
 To be another in this general frame ;
 Just as absurd to mourn the tasks or pains
 The great directing MIND OF ALL ordains.

All are but parts of one stupendous whole,
 Whose body Nature is, and God the soul :
 That, chang'd through all, and yet in all the same,
 Great in the earth as in th' ethereal frame,
 Warms in the sun, refreshes in the breeze,
 Glows in the stars, and blossoms in the trees ;
 Lives through all life, extends through all extent,
 Spreads undivided, operates unspent.

Breathes in our soul ; informs our mortal part
As full, as perfect, in a hair as heart ;
As full, as perfect, in vile man that mourns,
As the rapt seraph that adores and burns :
To him no high, no low, no great, no small ;
He fills, he bounds, connects, and equals all.

Cease then, nor order imperfection name,
Our proper bliss depends on what we blame.
Know thy own point : this kind, this due degree
Of blindness, weakness, Heav'n bestows on thee.
Submit. — In this, or any other sphere,
Secure to be as blest as thou canst bear ;
Safe in the hand of one disposing Pow'r,
Or in the natal or the mortal hour.
All Nature is but art, unknown to thee ;
All chance, direction, which thou canst not see ;
All discord, harmony not understood ;
All partial evil, universal good :
And, spite of pride, in erring reason's spite,
One truth is clear, *Whatever is, is right.*

POPE.

AUGUST THE THIRTY-FIRST.

On Intemperance in Eating.

It is no slight argument of the dishonour we incur by gluttony, that nothing is more carefully avoided in a well-bred company. Nothing would be thought by such more brutal and rude, than the discovery of any marks of having eaten intemperately, — of having exceeded that proportion of food which is requisite for our nourishment.

The influence that our food has upon our health, its tendency to preserve or impair our constitution, is the measure of its temperance or excess.

He alone is temperate, who eats not to gratify his taste, but to preserve his life ; who is the same at every table as his own ; who when he feasts is not cloyed ; and sees all the delicacies before him that luxury can accumulate, yet preserves a due abstinence in the midst of them.

To govern our appetite is necessary ; but there is no necessity that we should always mortify it. Life is no more to be passed in constant self-denial, than in a round of sensual enjoyments. We should endeavour that it may not be, at any time, painful to us to deny ourselves what is improper for us ; and, on that as well as other accounts,

it is most fitting that we should frequently practise self-denial — that we should often forego what would delight us. But to do this continually cannot be required of us, because it is not reasonable to think that it should be our duty wholly to debar ourselves of that food which our palate is *formed* to relish, and which may be used without any prejudice to our virtue, or our health.

Experience proves that nothing contributes more to the preservation of life than temperance; and they who describe the golden age, or the age of innocence, and near a thousand years of life, represent the customary food of it as the plainest and most simple.

The dissuaves from eating intemperately, that appear of the greatest weight, are these:

It is the grossest abuse of the gifts of Providence.

It is the vilest debasement of ourselves.

Our bodies owe to it the most painful discases, and generally a speedy decay.

It frequently interrupts the use of our nobler faculties, and it is certain, at length, greatly to enfeeble them.

The straits to which it often reduces us, occasion our falling into crimes which would otherwise have been our utter abhorrence.

DEAN BOLTON.

SEPTEMBER THE FIRST.

Phænomena of the Month of September.

THIS is in general a very agreeable month, the distinguishing softness and serenity of autumn with its deep-blue skies prevailing through great part of it. The days are now very sensibly shortened: and the mornings and evenings are chill and damp, though the warmth is still considerable in the middle of the day. This variation of temperature is one cause why autumn is an unhealthy time, especially in the warmer climates and in moist situations.

The labours of the husbandman have but a very short intermission; for, no sooner is the harvest gathered in, than the fields are again ploughed up and prepared for the winter corn, rye, and wheat, which are sown during this month and the next.

Not only the swallow-tribe, but many other small birds which feed on insects, disappear on the approach of cold weather, when the insects themselves are no longer to be met with.

On the other hand, some birds arrive at this season from still more northerly countries to spend the winter with us. The fieldfare and red-wing, whose departure was mentioned in March, return about the end of September. They feed chiefly on the berries with which our woods and hedges are plentifully stored all the winter.

The most useful fruit this country affords, the apple, successively ripens, according to its different kinds, from July to September or October; but the principal harvest of them is about the close of this month. They are now gathered for our English vintage, the cider-making, which in some counties is a busy and important employment.

The apples are taken, either fresh from the tree, or after they have lain awhile to mellow, and crushed in a mill, and then pressed till all their juice is extracted. This is set to ferment, whence it becomes cider, which may properly be called apple-wine. Pears treated in the same manner yield a vinous liquor called perry. These are the common drinks in the counties where they are chiefly made.

The autumnal equinox, when day and night are again equal over the whole globe, happens about the 23d of September. This, as well as the vernal, is generally attended with storms, which throw down much of the fruit yet remaining on the trees.

ATKIN.

SEPTEMBER THE SECOND.

Attributes of the Deity. (A Sunday Lesson.)

WE ascribe power to the Deity under the name of *Omnipotence*, the strict and correct conclusion being, that a power which could create such a world as this is, must be beyond all comparison greater than any which we experience in ourselves, or any which we observe in other visible agents; greater also than any which we can want for our individual protection and preservation. It is a power, likewise, to which we are not authorised by our observation or knowledge to assign any limits of space or duration.

Very much of the same sort of remark is applicable to the term *Omniscience*, infinite knowledge or infinite wisdom. In strictness of language there is a difference between knowledge and wisdom; wisdom always supposing

action, and action directed by it. With respect to knowledge, the Creator must know intimately the constitution and properties of the things which he created ; which also implies a foreknowledge of their action upon one another, and of their changes, as far as the same result from trains of physical and necessary causes. Where he acts, he is ; and where he is, he perceives. The wisdom of the Deity, as testified in the works of the creation, surpasses all idea which we have of wisdom drawn from the highest intellectual operations of the highest class of intelligent beings with whom we are acquainted. The degree of knowledge and power, requisite for the formation of created nature, cannot with respect to us be distinguished from infinite.

The Divine *Omnipresence* stands, in natural theology, upon this foundation: In every part and place of the universe we perceive the exertion of a power, which we believe to proceed from the Deity. In what part or point of space, that has ever been explored, do we not discover attraction? In what regions do we not find light? What kingdom is there of Nature, what corner of space, in which there is any thing that can be examined by us, where we do not fall upon contrivance or design? An agency so general as that we cannot discover its absence, or assign the place in which some effect of its continued energy is not found, must be ascribed to a being who is omnipresent. He who upholds all things by his power, may be said to be every where present. PALEY.

SEPTEMBER THE THIRD.

On the Senses of Sight, Hearing, Smell, and Taste.

IF, from examining the structure of the human form, we proceed to take a cursory view of the *senses*, we shall find them alike perfect and extraordinary.

First, then, bright and conspicuous as a star in the brow of evening, appears the *eye*. In its elevated situation it commands the most enlarged prospects : and conveys to our apprehension all the graces of blooming Nature, and all the glories of the visible Heavens. As the eye is so tender that a slight accident, scarcely perceivable by the other part of the body, would be very injurious to its delicate frame, it is, therefore, wisely guarded with the most solicitous care — a care evidently proportioned to its nice texture and extensive usefulness

How astonishing it is, that an image of the highest mountains, and a transcript of the most diversified landscapes, should enter the small circle of the pupil! How surprisingly artful, that the rays of light should paint on the optic nerves, in an instant of time, and in their truest colours and exactest lineaments, every species of external objects!

The *ear* consists of an outward porch and inner rooms, with tools of such admirable contrivance and finished workmanship, as are beyond description curious. The eye perceives only the objects that are before it; whereas the ear warns us of transactions that pass above us, behind us, all round us. The eye is useless amidst the gloom of night, and cannot carry its observation through the bolted door or the closed window-shutter; but the ear admits intelligence through the darkest medium and minutest cranny. The eye is upon duty only in our waking hours; but the ear is always expanded, always accessible; a courier which never tires; a sentinel ever at his post.

As there are tremulous concussions impressed upon the air, discernible only by the instruments of hearing, there are also odoriferous particles, wafted by the same aerial vehicle, which are perceivable only by the *smell*. So judiciously are the olfactory nerves laid, that they imbibe all the balmy fragrance of spring, all the aromatic exhalations of autumn, and enable us to banquet even on the invisible dainties of Nature.

Another capacity for frequent pleasure is bestowed in granting us the powers of *taste*. This sense is circumscribed in a manner peculiarly benign and wise, so as to be a standing though silent plea for temperance; because the exercise of sobriety sets the finest edge on its faculties, and adds the most poignant relish to its enjoyments.

The *SIGHT*, the *SMELL*, and the *TASTE*, are not only so many separate sources of delight, but a joint security to our health; they are the vigilant and accurate inspectors which examine our food, and inquire into its properties — whether it be pleasant or disagreeable, wholesome or noxious.

PALEY.

SEPTEMBER THE FOURTH.

The Price of Pleasure.

I THINK I will take a ride, said the little Lord Linger, after breakfast. Bring me my boots, and let my horse be brought to the door.

The horse was saddled, and his lordship's spurs were putting on—

No, said he, I'll have my low chair and the ponies, and take a drive round the park.

The horse was led back, and the ponies were almost harnessed, when his lordship sent his valet to countermand them. He would walk into the corn-field, and see how the new hunter pointed.

After all, says he, I think I will stay at home, and play a game or two at billiards.

He played half a game, but could not make a stroke to please himself. His tutor, who was present, now thought it a good opportunity to ask his lordship if he would read a little.

Why, I think I will, for I am tired of doing nothing. What shall we have?

Your lordship left off last time in one of the finest passages in the *Æneid*. Suppose we finish it.

Well—Aye—But no—I had rather go on with Hume's History. Or suppose we do some geography?

With all my heart. The globes are upon the study-table.

They went to the study; and the little lord, leaning upon his elbows, looked at the globe, then whirled it round two or three times, and listened patiently while the tutor explained some of its parts and uses. But while he was in the midst of a problem, Come, said his lordship, now for a little Virgil.

The book was brought; and the pupil with a good deal of help got through twenty lines.

Well, said he, ringing the bell, I think we have done a good deal. Tom! bring my bow and arrows.

The fine bow in its green case, with all its appurtenances, was brought, and his lordship went down to the place where the shooting-butts were erected. He aimed a few shafts at the target; but not coming near it, he shot the remainder at random, and then ordered out his horse.

He sauntered with a servant at his heels for a mile or two through the lanes; and came just as the clock struck twelve, to a village green, close by which a school was kept. A door flew open, and out burst a shoal of boys, who, spreading over the green, with immoderate vociferation, instantly began a variety of sports. Some fell to marbles; some to trap-ball; some to leap-frog. In short, not one of the whole crew but was eagerly employed. Every thing was noise, motion, and pleasure. Lord Linger

riding slowly up, espied one of his tenant's sons, who had been formerly admitted as a play-fellow of his, and called him from the throng

Jack, said he, how do you like school?

O, pretty well, my Lord.

What, have you a good deal of play?

O no. We have only from twelve to two for playing and eating our dinners; and then an hour before supper.

That is very little indeed.

But we play heartily when we do play, and work heartily when we work. Good bye, my Lord: it is my turn to go in at trap.

So saying, Jack ran off to his playmates. *

I wish I were a school-boy! cried the little lord to himself.

AIKIN

SEPTEMBER THE FIFTH.

The Olympic Games.

THE games and combats so much in use among the Greeks, were principally encouraged on account of their being admirably calculated for rendering the bodies of their youth robust and vigorous, that they might be enabled to support the fatigues of war: they likewise formed a material part of their religious ceremonies.

Of these exercises, the heroes of antiquity, such as Hercules, Theseus, Castor, and Pollux, were the original inventors; and the greatest poets aspire at glory by celebrating the praises of those who conquered and excelled in them. In process of time public instructors in these exercises arose, who formed a separate profession, and often made an ostentatious display of their skill by contending with one another in public.

Of these games there were four principal and solemn exhibitions; namely, the *Olympic*, the *Pythian*, the *Nemean*, and the *Isthmian*.

The Olympic games were the most celebrated for their grandeur and excellence. They are said to have been instituted by Pelops. No particular time was at first set apart for their celebration; but about the year before Christ, 784, Iphitis, king of Elis, fixed it to every fourth year. The games were consecrated to Jupiter, and were performed in the neighbourhood of Olympia, a city in the district of Pisa.

From this regulation, the period of four years which intervened between one celebration and another, was called an olympiad. Ancient authors reckon their chronology by olympiads, beginning at the olympiad which happened in the year before Christ 776.

The Greeks exerted their utmost efforts to support the magnificence of these games, which were regularly celebrated whilst that people maintained their liberty. The vast concourse of spectators who constantly flocked thither, inspired the combatants with the highest spirit of emulation, and to come off victorious was esteemed the greatest glory.

The year was distinguished by the name of the conqueror in the chariot-races, which were accounted the most honourable of all, and his praises were sung by the poets.

The victor in the chariot-races, after being adorned with a crown of olive, received a palm in his hand, and was conducted through the course by a herald, who proclaimed him victor by the sound of a trumpet. This was accompanied by loud shouts from the spectators. On returning to his native city, he made his entry through a breach made in the wall for that purpose, mounted on a chariot drawn by four horses, all his fellow-citizens going out to meet him.

ROBINSON.

SEPTEMBER THE SIXTH.

Structure of the Human Body.

THE contrivance of the human frame is made with such proportion and exactness, as conduce the most to its comeliness and service. For instance: we have a system of *bones*, cast into a variety of moulds, enlarged or contracted into multiplicity of sizes, most precisely fitted to their uses; *feet* that compose the firmest and neatest pedestal, infinitely beyond all that statuary and architecture can accomplish, possessing a set of the nicest springs, to render it capable of altering its form, and extending its size, as different circumstances require; *legs* and *thighs* like columns, and articulated in such a manner, that they administer most commodiously to the act of walking, yet obstruct not the easy posture of sitting.

We have *arms*, pendant on either side, exactly proportioned to each other, that the equilibrium of the structure may not be disconcerted. These being the guards which

defend and the ministers which serve the body, are fitted for the most diversified and extensive operations. To these are annexed the *hands*, terminated by the *fingers*, which together form a case of the finest instruments, or a collection of the noblest utensils : qualifying us for the execution of every work the projecting genius can devise, or the lavish fancy crave.

Above all is the *head*, a majestic dome, elevated on the neck, and designed for the residence of the brain : framed in exact conformity to its important purpose ; and, like a general's tent in an army, having a communication established with the most inferior and remote parts of the system.

If the bulky and obvious parts of the human frame fail not to excite our wonder, how shall we be astonished when we examine those minuter particles which are carefully hidden from the view, and with which our structure abounds ! Here are *ligaments*, a strong and tough arrangement of fibres to unite the several limbs. *Membranes*, or thin flexible tunics, appointed to enwrap the fleshy parts, to form a connection between some, and a separation between others.

Arteries, or small rivers, which ascend to the head, spread themselves over the shoulders, extend to the arms, descend to the feet, and strike out, as they go, into numberless smaller canals ; obliging the crimson current to pass into the narrowest defiles, and distribute itself into all quarters. *Veins*, (appointed to receive the blood from the arteries, and convey it back to the heart,) which, pervading or lying parallel with the skin, beautify and adorn those parts intended for public view.

Glands, whose office it is to filtrate the passing fluid, each of which is an assemblage of vessels that draw off the finest as well as the grossest parts of the blood, and form secretions far more curious than the most admired operations of chemistry. *Muscles* woven in nature's nicest loom ; composed of the slenderest fibres, yet endued with incredible strength ; and with their *tendons* annexed, constituting the instruments of motion. *Nerves*, minute tubes derived from the brain, which diffuse the power of sensation through the body.

Nor are the expedients less amazing that are employed to concoct, digest, and assimilate the food ; to convert it into *chyle*, to blend it with the blood, and to distribute both through the whole system. By these wise means, the animal constitution is nourished and maintained ; in youth its bulk is increased ; in manhood its health is re-

served; and in age its decays are repaired. These are a few, and but a few instances of that contrivance, regularity, and beauty, which are observable in the human frame. PALEY.

SEPTEMBER THE SEVENTH.

The Animal and Vegetable World compared.

*THE earth is covered with vegetables and animals, the entire vocabulary of which no scholar, no academy, no one nation, has ever been able perfectly to acquire. An intelligent naturalist at Paris, some years ago, announced that he was in possession of more than thirty thousand distinct species of animals, while his herbals contained only eighteen thousand species of plants. This number of animals, however, so superior to that of vegetables, is a mere nothing in comparison with what exists on the globe.

When we recollect that every species of plant is a point of union for different genera of insects; and that there is not perhaps a single one but has peculiar to itself a species of fly, butterfly, gnat, beetle, lady-bird, snail, and the like; that these insects serve for food to other species, and these, too, exceedingly numerous, such as the spider, the dragon-fly, the ant, the formica-leo; and to the immense families of small birds, of which many classes, such as the woodpecker and the swallow, have no other kind of nourishment! that these birds are in their turn devoured by birds of prey, such as kites, falcons, buzzards, rooks, crows, hawks, vultures, and others; that the general spoil of these animals, swept off by the rains into the rivers, and thence to the sea, becomes the aliment of almost innumerable tribes of fishes, to the greatest part of which the naturalists of Europe have not hitherto given a name; that numberless legions of river and sea fowls prey upon these fishes:—when we recollect all this, we shall have good ground for believing, that every species of the vegetable kingdom serves as a basis to many species of the animal kingdom, which multiply around it as the rays of a circle round its centre.

I have not included in this superficial representation either quadrupeds, with which all the intervals of magnitude are filled, from the mouse which lives under the grass, to the cameleopard, who can feed on the foliage of trees

at the height of fifteen feet; or the amphibious tribes; or the birds of night; or reptiles or polypuses, of which we have so slender a knowledge; or sea-insects, some families of which, such as the crab, shrimp, and the like, would be alone sufficient to fill the greatest cabinets.

I have made no mention of insects of many kinds; neither have I taken into the account that infinite number of living things, visible and invisible, known and unknown, which have no fixed determination, and which Nature has scattered about, through the air, over the earth, and along the depths of the ocean. ST. PIERRE

SEPTEMBER THE EIGHTH.

Dangers of Sloth and Luxury.

HACHO, a king of Lapland, was in his youth the most renowned of the northern warriors. His martial achievements remain engraved on a pillar of flint, and are to this day solemnly carolled to the harp of the Laplanders, at the fires with which they celebrate their nightly festivities.

Nor was he less celebrated for his prudence and wisdom than his valour; and above all, his temperance and severity of manners were his chief praise. In his early years he never tasted wine; nor would he drink out of a painted cup. He constantly slept in his armour, with his spear in his hand; nor would he use a battle-axe whose handle was inlaid with brass. He did not, however, persevere in this contempt of luxury; nor did he close his days with honour.

One day, after hunting the gulos, or wild hog, being bewildered in a solitary forest, and having passed the fatigues without any interval or refreshment, he discovered a large store of honey in the hollow of a pine-tree. This was a dainty which he had never tasted; and being both faint and hungry, he fed greedily upon it. From this unusual and delicious repast he received so much satisfaction, that at his return home he commanded honey to be served up at his table every day.

His palate by degrees became refined and vitiated; he began to lose his native relish for simple fare, and contracted a habit of indulging himself in delicacies; he ordered the delightful gardens of his palace to be thrown open, (in which the most luscious fruits had been suffered

to ripen and decay, unobserved and untouched, for many revolving autumns,) and gratified his appetite with luxurious deserts. At length he found it expedient to introduce wine as an agreeable improvement, or a necessary ingredient, to his new way of living; and having once tasted it, he was tempted by little and little to give loose to the excesses of intoxication. His general simplicity of life was changed; he perfumed his apartments, and commanded his helmet to be ornamented with beautiful rows of the teeth of the rein-deer. Indolence and effeminacy stole upon him by imperceptible gradations, relaxed the sinews of his resolution, and extinguished his thirst of military glory.

While Hacho was thus immersed in pleasure, the king of Norway invaded his kingdom with a formidable army. Hacho roused himself, and marched forward to meet him. Both armies joined battle in the forest where Hacho had been lost after hunting; and the king of Norway challenged him to single combat, near the very spot where he had tasted the honey. The Lapland chief, languid and long unused to arms, was soon overpowered, and before his insulting adversary struck his head from his body, he uttered this exclamation, I fall a sacrifice to sloth and luxury. The honey which I tasted in this forest, and not the hand of the king of Norway, conquers Hacho.

JOHNSON.

SEPTEMBER THE NINTH.

The Omnipresence of God. (A Sunday Lesson.)

WHEN ignorant mortals attempt to think and speak concerning the nature of the one infinite and eternal Deity, what can be expected but that their conceptions should be feeble, and their representations inadequate? If there be mysteries in the smallest particle of matter, which the most perfect human understanding cannot unfold, who can wonder that we cannot comprehend the perfections of the Almighty? Self-existence, infinity, and eternity, are ideas too vast for the human intellect to comprehend; such knowledge is too wonderful for us; it is high, and we cannot attain unto it.

If a power be universally exerted to preserve the order of Nature, it is evident that the Being in whom this power resides must be every where present. The Eternal Mind

on whom all Nature depends—who causes the revolutions of day and night—summer and winter—who supports the whole animal and intellectual world in that beautiful regularity which he at first established—who inspires all Nature with life and joy—must fill the universe with his presence.

The universal presence of an intelligent mind necessarily includes the idea of universal knowledge. That great Being, who fills every portion of space, must at the same time be intimately acquainted with every thing that exists. The universe, in all its parts, is continually under the Divine inspection, and he comprehends in one view the immensity of the creation.

The doctrine of the Divine omnipresence, and omniscience, may be applied as a powerful motive to abstain from every vice, and to live in a sincere and steady practice of all virtue.

Our actions lie as open to the Divine inspection in the thickest midnight darkness, as in the full blaze of the meridian sun. Man may retire from the world to practise the “hidden things of dishonesty” and wickedness, but there is no recess into which they can retire from the Almighty: “He compasseth our path, and is acquainted with all our ways.” No action, no word, no sentiment, can be concealed from his observation. ENFIELD.

SEPTEMBER THE TENTH.

Sagacity displayed in the Habitations of Beavers.

THE American beavers are the most sagacious and industrious of all animals, and erect edifices superior in contrivance to those of the savage human natives of their wilds. In order to form a habitation, they select a level piece of ground, with a small rivulet running through it. To effect their works, a community of two or three hundred assemble; and every individual of this community bears his share in the laborious preparations.

The first object is, to form a dam: to do this it is necessary that they should stop the stream, and of course that they should know in which direction it runs. This seems a very wonderful exertion of intellect; for they always do it in the most favourable place for their purpose, and never begin at a wrong part. They drive stakes, five or six feet long, into the ground, in different

344 *Sagacity displayed in the Habitations of Beavers.*

rows, and interweave them with branches of trees; filling them up with clay, stones, and sand; which they ram so firmly down, that though the dams are frequently a hundred feet long, a man may walk over them with the greatest safety.

The houses which these wise animals build, are erected upon piles in the water, thus connected by means of the dam; and are either of a circular or oval shape, with arched tops, on the outside resembling a dome, and on the inside having the shape of an oven. These houses are constructed, with the utmost ingenuity, of earth, stones, and sticks, cemented together, and plastered in the inside with surprising neatness. The walls are about two feet thick; and the floors so much higher than the surface of the water, as always to prevent them from being flooded. — Some of the houses have only one floor, others have three.

The number of beavers in each house is from two to thirty. These sleep on the floor, which is strewed with leaves and moss, and each individual is said to have its own place. When they form a new settlement, they begin to build their houses in the summer; and it costs them a whole season to finish the work, and lay in their winter provisions; consisting principally of bark, and the tender branches of trees cut into certain lengths, and piled in heaps under the water.

The houses have each one opening, which is under the water, and always below the thickness of the ice; by which means they are secured from the effects of frost.

The beavers seldom quit their residence unless they are disturbed, or their provisions fail. They frequently erect a new house annually; but sometimes merely repair their old one. It often happens that they build a new house so close to the old that they cut a communication from one to the other.

During the summer, they forsake their houses, and ramble about from place to place; sleeping under the covert of bushes, near the water-side. On the least noise, they betake themselves into the water for security; and they have sentinels, who, by a certain cry, give notice of the approach of danger.

Ought not such intelligent creatures to be respected by man, instead of being wantonly hunted and butchered, as they frequently are?

BINGLEY.

SEPTEMBER THE ELEVENTH.

The Ruins of Herculaneum.

AN inexhaustible mine of ancient curiosities exists in the ruins of Herculaneum, a city lying between Naples and Mount Vesuvius, which in the first years of the reign of Titus was overwhelmed by a stream of lava from the neighbouring volcano. This lava is now of a consistency which renders it extremely difficult to be removed; being composed of bituminous particles, mixed with cinders, minerals, and vitrified substances, which altogether form a close and ponderous mass.

In the revolution of many ages, the spot it stood upon was entirely forgotten; but in the year 1713 it was accidentally discovered by some labourers, who, in digging a well, struck upon a statue on the benches of the theatre. Several curiosities were dug out and sent to France, but the search was soon discontinued; and Herculaneum remained in obscurity till the year 1736, when the king of Naples employed men to dig perpendicularly eighty feet deep; whereupon not only the city made its appearance, but also the bed of the river which ran through it.

In the temple of Jupiter were found a statue of gold, and the inscription that decorated the great doors of the entrance. Many curious appendages of opulence and luxury have since been discovered in various parts of the city, and were arranged in a wing of the palace of Naples, among which are statues, busts, and altars; domestic, musical, and surgical instruments; tripods, mirrors of polished metal, silver kettles, and a lady's toilet furnished with combs, thimbles, rings, ear-rings, &c.

A large quantity of manuscripts was also found among the ruins; and very sanguine hopes were entertained by the learned, that many works of the ancients would be restored to light, and that a new mine of science was on the point of being opened; but the difficulty of unrolling the burnt parchments, and of decyphering the obscure letters, has proved such an obstacle, that very little progress has been made in the work.

The streets of Herculaneum seem to have been perfectly straight and regular; the houses well built, and generally uniform; and the rooms paved either with large Roman bricks, mosaic work, or fine marble. It appears that the town was not filled up so unexpectedly with the melted

lava, as to prevent the greatest part of the inhabitants from escaping with their richest effects; for there were not more than a dozen skeletons found, and but little gold or precious stones.

The town of Pompeii was involved in the same dreadful catastrophe; but was not discovered till near forty years after the discovery of Herculaneum. Few skeletons were found in the streets of Pompeii; but in the houses there were many, in situations which plainly proved that they were endeavouring to escape when the tremendous torrent of burning lava intercepted their retreat.

KOTZEBUE.

SEPTEMBER THE TWELFTH.

The Habitations of Animals.

MAN, having the gift of reason and understanding, is able to contrive and build as his pleasure leads him, and his abilities will admit. From the meanest huts and cottages he can erect himself stately buildings, bedeck them with the exquisite arts of architecture and painting, and ennoble and render them delightful by gardens, avenues, and fountains.

But as ingenuity without materials would be fruitless, the great varieties of trees, earths, stones, and plants, that are materials for this very service of building, and which abound in every part of the world, are deserving of our notice.

And no less shall we find sufficient provision made for the rest of the creatures; for although they want the power of reason to vary their methods, and cannot add to, diminish from, or make any improvements upon their natural way, yet we find that instinct which the Creator hath implanted in them to be abundantly sufficient for the respective use and purpose of each particular species of animal.

If, for instance, some beasts make to themselves no habitation, in this case we find there is no need it should be otherwise, as they are taken care of and provided for by man. If others repose themselves and their young in holes and dens, it is because such guard or security is wanting, their lives being sought either by the hostility of man, or to satisfy the appetite of rapacious animals.

If some creatures make their nests in houses, some in trees, some in the earth, some in stone, and some in the

waters, we find that they can there sufficiently and well repose, and can secure themselves and breed up their young.

Thus admirable are the natural sagacity and instinct of the irrational animals in the convenience and method of their habitations, and no less in the fabric of them. The skill exerted in the dexterity of their works, frequently exceeds the skill of man to imitate. With what inimitable art do birds lay sticks, straws, moss, and dirt together, and form them into commodious nests! With what art do many of them thatch over and coat their nests outside, to mislead and deceive the eye of spectators, as well as to guard and fence against the injuries of weather! With what prodigious skill do some foreign birds not only weave the fibrous parts of vegetables together, and curiously tunnel and form them into nests, but also artificially suspend them on the tender twigs of trees, to keep them out of the reach of rapacious animals!

The manufactures of animals differ from those of men in many striking particulars. No animal ever introduced any new improvement or any variation from the former practice; every one of the species has equal skill from the beginning without teaching, without experience, and without habit; every one has its art by a kind of inspiration, with the ability of working in it to perfection without any knowledge of its principles, rules, or end. DERHAM.

SEPTEMBER THE THIRTEENTH.

The Hare and the Tortoise.

IN days of yore, when Time was young,
When birds convers'd as well as sung,
When use of speech was not confin'd
Merely to brutes of human kind,
A forward hare, of swiftness vain,
The genius of the neighb'ring plain,
Would oft deride the drudging crowd,
For geniuses are ever proud:—
He'd boast his flight 'twere vain to follow
For dog and horse he'd beat them hollow,
Nay, if he put forth all his strength,
Outstrip his brethren half a length.

A tortoise heard his vain oration,
And vented thus his indignation;

Oh puss! it bodes thee dire disgrace,
When I defy thee to the race.
Come 'tis a match; nay, no denial,
I lay my shell upon the trial.
'Twas done, and done! All fair! a bet!
Judges prepar'd and distance set.

The scamp'ring hare outstripp'd the wind;
The creeping tortoise lagg'd behind;
And scarce had pass'd a single pole,
When puss had almost reach'd the goal.
Friend tortoise, quoth the jeering hare,
Your burden's more than you can bare;
To help your speed it were as well
That I should ease you of your shell:
Jog on a little faster, pr'ythee;
I'll take a nap, and then be with thee.

So said, so done, and safely sure;
For say what conquest more secure?
Whene'er he wak'd (that's all that's in it)
He could o'ertake him in a minute.
The tortoise heard his taunting jeer,
But still resolv'd to persevere;
Still drawl'd along, as who should say,
I'll win, like Fabius, by delay;
On to the goal securely crept,
While puss, unknowing, soundly slept.

The bets were won, the hare awoke,
When thus the victor-tortoise spoke:
Puss, though I own thy quicker parts,
Things are not always done by starts;
You may deride my awkward pace,
But slow and steady wins the race.

LLOYD.

SEPTEMBER THE FOURTEENTH.

A Gas Light Manufactory.

IF we suppose the boundary lines of the manufactory such as to form a square, it would be advisable to have the entrance about mid-way of one of the sides. At one side of the gateway, there might be erected a house for the officer superintending the works; and at the other, another of similar appearance, fitted up for the different offices.

The retort-house should stand with one of its ends near the entrance; and the chimney should be placed at the other. A sufficient space should be left to allow a team to pass entirely round the retort-house, to prevent the necessity of turning in the yard, which, when confined, is attended with inconvenience. It would be well to have a range of buildings on each side of the retort-house, running parallel thereto, and contiguous to the boundary lines: that on one side being fitted up so as to allow the lower part to form stores for castings, and heavy stores, and the upper for work-shops for the mechanics, and for small stores. The other building might be divided so as to form stores for coal and coke in the lower part, and above for other products.

Beyond the retort-house might be placed the condenser, tar-vessel, purifier, and gas-meter, in a line parallel to its end; between these and the side opposite to that of entry, might be occupied by the gas-holders. An arrangement like this would present an uniformity of appearance, and a saving of room, which does not always appear to be considered by the manufacturer. However, the arrangement of the apparatus will vary with local circumstances; and, therefore, no general rule can be given for the purpose. It will be obvious, notwithstanding, that it will be well, to place the gas-holders at as great a distance from the retort-house as the premises will allow.

Supposing the works to be complete, and the retorts heated to a bright cherry redness, preparatory to being charged; the lid is then removed from the mouth-piece, and a portion of luting, made of clay or Windsor loam, put round the edge of it. The coal is next introduced into the retort, after which the lid is put on, and secured by means of the cross-piece, so as to form a gas-tight joint.

The distillatory process now commences, and the gas is carried up the pipe connected to the mouth-piece (with the tar and ammoniacal fluid in a gaseous state) over the pipe into the hydraulic main, till the whole of the evaporable products are extracted from that charge, when the lid is removed and reluted, the charge drawn, and another introduced as before. This process goes on continually, till the retort is destroyed.

The gas, tar, and ammonia, having descended into the hydraulic main, they are conveyed away from it, by means of cast-iron pipes, towards the condenser, and, having passed through that vessel, the tar and ammoniacal liquor enter into the tar-cistern, whilst the gas passes into the

purifier, where it undergoes a process, for depriving it of the sulphuretted hydrogen gas and carbonic acid gas evolved with it. It then passes through the gas-meter, in order that the quantity made may be registered, on its way to the gas-holder, and, entering that, it is stored up, till wanted for use. PECKSTON.

SEPTEMBER THE FIFTEENTH.

On Manufactures.

A MANUFACTURE is something made by the hand of man. The term is derived from two Latin words, *manus* the hand, and *facere* to make. Manufactures are therefore opposed to *productions*, which latter are what the bounty of Nature spontaneously affords us—as fruits, corn, marble.

We do not apply the term manufacture to the preparation of any article for food, probably from an idea that food is of too perishable a nature, and generally obtained by a process too simple to deserve the name. We say, therefore, sugar-works, oil-mills, chocolate-works; we do not say a beer manufactory, but a brewery; this, however, is only a nicety of language, for, properly, all those are manufactories, if there is much of art and curiosity in the process.

The making of watches is a manufacture; the silver, iron, gold, or whatever else is used in it, are productions, the material of the work; but it is by the wonderful art of man that they are wrought into the numberless wheels and springs of which this complicated machine is composed.

Manufactures require great expenses for their first establishment, costly machines for shortening manual labour, and money and credit for purchasing materials from distant countries. There is not a single manufacture of Great Britain which does not require, in some part or other of its process, productions from the different parts of the globe; it requires, therefore, ships and a friendly intercourse with foreign nations, to transport commodities, and exchange productions. We could not be a manufacturing unless we were a commercial nation.

The two sciences which most assist the manufacturer, are mechanics and chemistry;—the one for building mills, working mines, and in general for constructing wheels, wedges, pulleys, &c. either to shorten the labour of man

by performing it in less time, or to perform what the strength of man alone could not accomplish ; — the other fusing and working ores, in dyeing and bleaching, and extracting the virtues of various substances for particular occasions.

AIKIN.

SEPTEMBER THE SIXTEENTH.

Grandeur and Magnificence of Nature. (A Sunday Lesson.)

THE characters of grandeur and magnificence are so legibly inscribed upon the general face of Nature, that the most untaught eye cannot fail to read them, nor the most uncultivated imagination contemplate them without admiring. The surface of the earth, considered merely as a vast picture drawn by the hand of Nature, exhibits scenes adapted to excite emotions of sublimity. Plains whose extent exceeds the limits of human vision ; mountains, whose sides are embrowned with craggy rocks, and whose majestic summits hide themselves in the clouds, seas, whose spreading waters unite far distant countries and oceans, which begird the vast globe itself ; are objects at all times striking to the imagination.

If from the Earth we lift our eyes upward, new scenes of magnificence demand our attentive admiration : the glorious Sun, the eye and soul of this material world, possessing his seat amidst the vast expanse, and spreading light and heat through the world ; and, in their turn, the numberless lamps of night illuminating the firmament with their native fires.

Let the great powers of Nature be brought into action, and still more sublime and awful appearances rise to our view. Let woods and forests wave before the stormy winds ; let ocean “ heave from his extended bed,” and roll his threatening billows to the sky : let volcanoes pour forth pillars of smoke and melted torrents from their fiery caverns ; let lightnings dart their vivid fires through the sky, whilst thunders roar among the bursting clouds ; what imagination shall remain unimpressed with emotions of admiration mingled with terror ?

The man who is enlightened by the study of Nature, sees this earth as a globe of vast magnitude, moving perpetually round the sun with a degree of rapidity much greater than has ever been produced by human force or art ; at the same time he sees other globes, some less, and others much

larger, than the earth, revolving with inconceivable rapidity round the sun, as their common centre, at distances so great that, though they may be expressed in numbers, they far exceed the utmost stretch, of the human imagination. This set of planets, which he knows to have, with our earth, a common relation to the sun, he very reasonably concludes to be a system of worlds, all peopled with suitable inhabitants, and all deriving supplies of light and heat from the same source.

Extending his views beyond this system, and finding, from observation, that the fixed stars are in themselves luminous bodies, and that their distance from the earth is so much greater than that of the planets or sun, as to be absolutely immeasurable,—he concludes, upon the most probable grounds, that those sparkling gems which deck the robe of night, are not placed in the heavens merely for the convenience of this earth, but are, like our glorious luminary, suns to their respective systems of worlds.

ENFIELD.

SEPTEMBER THE SEVENTEENTH.

On Evaporation and Distillation.

IT is the property of heat, or atomic motion, to make most things fly off in vapour; which effect is called evaporation or exhalation. But this it does in very different degrees to different substances. Some evaporate very easily, others with difficulty, and others not at all by the most violent fire, or atomic motion, which we can raise.

Fluids in general are easily evaporable, but not equally so. Spirits of wine fly off in vapour much sooner than water; so that, in a mixture of the two, by applying a gentle heat, all the spirit may be driven off, and the water left pure. Water again is more evaporable than oil.

Some solid substances are much disposed to evaporate. Thus smelling salts, by the application of heat, may be entirely driven away in the air. But in general, solids are more fixed than fluids; and therefore, when a solid is dissolved in a fluid, it may commonly be recovered again by evaporation. By this operation, common salt is got from sea-water and salt-springs, both artificially, and, in hot countries, by the natural heat of the sun. When the water is no more than just sufficient to dissolve the salt, it is called a saturated solution: and on evaporating the

water further, the salt begins to separate, forming little regular masses called crystals. Sugar may be made likewise to form crystals, and then it is sugar-candy.

Water that evaporates ascends into the air, and unites with it: but if in its way it be stopped by any cold body, it is condensed; that is, it returns to the state of water again. Lift up the lid of a tea-pot, and water will be seen collected on the inside of it, which is condensed steam from the hot tea beneath. Hold a spoon or a knife in the way of the steam which bursts out from the spout of the tea-kettle, and it will be immediately covered with drops.

This operation of turning fluid into vapour, and then condensing it, is called *distillation*. For this purpose, the vessel in which the liquor is heated is closely covered with another called the head, into which the steam rises and is condensed. It is then drawn off by means of a pipe into another vessel called the receiver. In this way all sweet-scented and aromatic liquors are drawn from fragrant vegetables, by means of water or spirits. The fragrant part being very volatile, rises along with the steam of the water or spirit, and remains united with it after it is condensed. Rose-water and spirit of lavender are liquors of this kind.

Salt water is made fresh by distilling; the salt, being of a fixed nature, does not rise with the steam; and therefore, on condensing the steam, the water is found to be fresh. And this indeed is the method nature employs in raising water by exhalation from the ocean, which collecting into clouds, is condensed in the cold regions of the air, and falls in rain.

SEPTEMBER THE EIGHTEENTH.

On Metals.

THERE are six kinds of metals; namely, *gold*, *silver*, *copper*, *iron*, *lead*, and *tin*; to which some add mercury, as a seventh; and thirty other inferior metals have been produced by modern experiments in chemistry.

Gold is the heaviest, purest, and most ductile of all metals. It is chiefly found in mines, though sometimes gold dust is found in the sand and mud of rivers, particularly in Guinea; and hence the name for our largest

gold coin. There are gold mines in most countries in the world; in Europe, however, they are very sparingly scattered. The mines of Chili and Peru in America are the richest; but very fine gold is found in some parts of the East Indies. — Of all the properties of gold, its ductility is the most surprising. A single ounce of gold may be extended by the gold beater's hammer to a surface of near 150 square feet; and by the gold-wire drawers it is extended to upwards of a thousand, yet remains so entire, that not the least flaw can be perceived even by the help of the microscope.

Silver is a white rich metal, and, except gold, the finest and most ductile. There are silver mines in all parts of the world; but those of Potosi in Peru, and some others in America, are the most productive, and continue to yield the ore in as great plenty as when first discovered; with this difference only, that the veins which were then almost on the surface of the mountain, are now sunk so deep, that the workmen go down to them by a descent of four or five hundred steps.

Copper is a hard, dry, heavy, ductile metal, abounding in vitriol and ill-digested sulphur, and found in most parts of Europe, but particularly in Sweden. It is the lowest-priced metal used for coin.

Iron is a hard, dry, fusible, and ductile metal, consisting of earth, salt, and sulphur, but all impure, ill-digested and ill-mixed; which renders it liable to rust. By heating it in the fire, hammering, and letting it cool itself, it is softened; by plunging it when hot into water, it is hardened. There are several considerable iron-works in England, particularly those in the forest of Dean in Gloucestershire, where the ore is found in great abundance. Though iron is the cheapest, it is certainly the most useful of metals, and seems indispensably necessary to the carrying on every art and manufacture. Nay, it appears to be a greater mean of polishing and civilising mankind than the more precious metals.

Lead is a coarse, heavy, soft metal, containing a little mercury, some sulphur, and a great deal of earth. Lead is found in most countries of the world, but is particularly plentiful in England. The various purposes to which it may be applied are universally known.

Tin is a whitish metal, not so hard as silver, nor so soft as lead: but though not so soft, it is more easily melted. The stannaries or tin mines in the county of Cornwall

furnish the greatest part of the tin which is consumed in Europe.

Six pounds of brass, and fifteen pounds of lead to a hundred pounds of tin, make the composition which is called *peufter*.

Mercury, or, as it is otherwise called, quicksilver, is an imperfect metal, neither ductile nor malleable; that is, neither capable of being drawn into length, nor spread into breadth by the hammer. It consists entirely of a fluid matter resembling melted silver. It is found chiefly in Hungary, Spain, Italy, and Peru. The greatest part of what is consumed in England is brought from the mines of Friuli in Italy. Mercury is the heaviest of all metals, except gold. It is also the most fluid of all bodies; that is, its parts adhere the least to each other, and are the most easily separated. Mercury is extremely volatile, and may be turned into fume by a very gentle heat. It easily enters and closely adheres to gold, less easily to silver, with difficulty to copper, and to iron not at all.

SEPTEMBER THE NINETEENTH.

The Progress of Life.

ALL the world's a stage,
And all the men and women merely players.
They have their exits and their entrances;
And one man in his time plays many parts,
His acts being seven ages. — At first the infant,
Mewling and puking in the nurse's arms,
And then the whining school-boy, with his satchel,
And shining morning face, creeping like snail
Unwillingly to school. — And then the lover,
Sighing like furnace, with a woeful ballad
Made to his mistress' eye-brow. — Then a soldier,
Full of strange oaths, and bearded like the pard,
Jealous in honour, sudden and quick in quarrel;
Seeking the bubble reputation
Even in the cannon's mouth. — And then the justice,
In fair round belly with good capon lin'd,
With eyes severe, and beard of formal cut,
Full of wise saws and modern instances, —
And so he plays his part. The sixth age shifts

Into the lean and slipper'd pantaloon,
 With spectacles on nose, and pouch on side ;
 His youthful hose well sav'd, a world too wide
 For his shrunk shanks ; and his big manly voice,
 Turning again toward childish treble pipes,
 And whistles in his sound. Last scene of all,
 That ends this strange eventful history,
 Is second childishness, and mere oblivion,
 Sans teeth, sans eyes, sans taste, sans every thing !
 SHAKESPEARE.

SEPTEMBER THE TWENTIETH.

Rules for Conversation.

TALK often, but never long ; in that case, if you do not please, at least you are sure not to tire your hearers. Pay your own reckoning, but do not treat the whole company ; this being one of the very few cases in which people do not care to be treated ; every one being fully convinced that he has wherewithal to pay.

Tell stories very seldom, and absolutely never but where they are very apt, and very short. Omit every circumstance that is not material, and beware of digressions. To have frequent recourse to narrative betrays great want of imagination.

Never hold any body by the button, or the hand, in order to be heard out ; for if people are not willing to hear you, you had much better hold your tongue than them.

Take, rather than give, the tone of the company you are in. If you have parts, you will show them, more or less, upon every subject ; and if you have not, you had better talk sillily upon a subject of other people's, than any of your choosing.

Above all things, and upon all occasions, avoid speaking of yourself, if it be possible. Such is the natural pride and vanity of our hearts, that it perpetually breaks out, even in people of the best parts, in all the various modes and figures of egotism.

When, historically, you are obliged to mention yourself, take care not to drop one single word that can directly or indirectly be construed as fishing for applause. Be your character what it will, it will be known ; and nobody will take it upon your own word. Never imagine

that any thing you can say yourself will varnish your defects, or add lustre to your perfections: but, on the contrary, it may, and nine times in ten will, make the former more glaring, and the latter obscure. If you are silent upon your own subject, neither envy, indignation; nor ridicule, will obstruct or allay the applause which you may really deserve; but if you publish your own panegyric, upon any occasion, or in any shape whatsoever, and however artfully dressed or disguised, they will all conspire against you, and you will be disappointed of the very end you aim at.

Neither retail nor receive scandal, willingly: for though the defamation of others may, for the present, gratify the malignity or the pride of our hearts, cool reflection will draw very disadvantageous conclusions from such a disposition: and in the case of scandal, as in that of robbery, the receiver is always thought as bad as the thief.

Mimickry, which is the common and favourite amusement of little low minds, is in the utmost contempt with great ones. It is the lowest and most illiberal of all buffoonery. Pray, neither practise it yourself, nor applaud it in others. Besides that, the person mimicked is insulted; and, as I have often observed to you before, an insult is never forgiven.

CHESTERFIELD.

SEPTEMBER THE TWENTY-FIRST.

On the Reformation of the Calendar.

AMONG the Greeks and other ancient nations, the length of the year was generally regulated by the course of the moon; and their months were made to consist of twenty-nine and thirty days alternately, and their year of three hundred and fifty-four days. But as the time between two successive full moons is now known to be twenty-nine days twelve hours forty-four minutes and three seconds; and the time the sun takes to move from one of the solstitial points to the same point again, is three hundred and sixty-five days five hours forty-eight minutes and forty-nine seconds; it is evident that this computation, although it agreed tolerably well with the course of the moon, must yet have been extremely defective, the difference between the lunar year and the true solar year being more than eleven days.

A reformation of this calendar was made in the year of Rome 708, under the reign of Julius Cæsar; and as it was computed that near ninety days had been lost by the former method of reckoning, these were now taken into the account, and the first Julian year was made to consist of four hundred and forty-four days; which was therefore called the Year of Confusion. After this the beginning of the year was fixed to the first of January, and each of the months, except February, was divided into thirty or thirty-one days as they are at present. The odd day, which arises out of the six hours above mentioned, was introduced into the calendar every fourth year, by reckoning the 24th of February twice over; and as this day, in the old account, was the same as the sixth of the calends of March, which had been long celebrated on account of the expulsion of Tarquin, it was called *bis sextus calendas Martii*; from which we have derived our name of Bissextile, or Leap Year.

The Julian account, as this method of reckoning has since been called, though far superior to any which preceded it, was, however, still imperfect; for, as the time in which the sun performs his annual revolution is not exactly three hundred and sixty-five days six hours, but three hundred and sixty-five days five hours forty-eight minutes and forty-nine seconds, the civil year must therefore have exceeded the solar year by eleven minutes and eleven seconds; which in the space of one hundred and thirty years amounted to a whole day: and consequently, in forty-seven thousand four hundred and fifty years, the beginning of the year would have advanced forward through all the seasons; so that in half this space of time the summer solstice, according to the Julian calendar, would have fallen in the midst of winter, and the earth been covered with frost when the bloom of vegetation was expected.

The difference between the old and new style occasioned in England much inconvenience; and popular prejudices greatly retarded the introduction of the reformed calendar till the year 1752, when an act of parliament was obtained for that purpose.

And as a hundred and seventy years had elapsed since the Gregorian alteration took place, the old style had consequently gained above a day more upon the course of the sun than it had at that time: it was therefore enacted, that instead of cancelling ten days, as had been done by the pope, eleven days should be left out of the month of

September ; and accordingly, on the second of that month the old style ceased, and the next day, instead of being the third, was called the fourteenth. There is now a difference of twelve days between the old and the new style.

BONNYCASTLE.

SEPTEMBER THE TWENTY-SECOND.

Of Friendship between Brothers and Sisters.

FRIENDSHIP is a noble and real sentiment ; the source of it is pure, and springs from the heart. The ancients, so ingenious in their emblems, gave as a device for friendship these words : *Far and near, summer and winter* ; meaning to express, that, being of all seasons, it charms equally the radiant days of youth, and the last moments of life.

Without doubt the truest friends of young persons of both sexes, the most necessary, the most tender they can have, are the authors of their days. It is, however, still natural they should desire a friend of their own age, a companion who, though unable to guide them in the career of life, may at least follow them to its conclusion. But how difficult is it to make the choice, and how sad to be deceived in making it ! Young and without experience, you wish for a young friend ! But how or where can you find him ? The friend you seek has not yet acquired a reputation : who can answer for his character ? The virtues of his parents ? Can you be certain he inherits them ? Are you acquainted with the particulars of his education, and whether he may have profited by it ? In supposing his education good, and his principles the same, are you certain he may have firmness enough always to preserve them ? Do you know his heart, his character, his tastes, and his defects ?

Without knowing all this you would choose at hazard an alliance ; you would choose a friend, as you would a lottery ticket. And if you should be abused and deceived by agreeable appearances, and place your confidence in a weak and despicable object, what chagrin are you preparing for yourself, and to what dangers are you exposed ? But, if you should have a brother, ah ! could you seek a better friend ! an alliance so sweet, so sacred, does it not assure you, that you could not ? This

is in truth the friend you desire; nature gives him to you know then how to appreciate the blessing.

Bred up together — the same education, the same principles, the same interests, the same affections, unite you. What other friend can you know so thoroughly? What other friend would partake, like a brother, your happiness, your griefs, your taste, and all your sentiments? He must, with you, respect the objects of your veneration; he must think and act as you do; his exterior even is conformable to yours: if you are in affliction, he is not permitted to give himself up to dissipation: if you are obliged to wear the sorrowful garb of mourning, he must also do the same: your names are alike; your birth and common ancestors establish between you the most perfect equality; he cannot signalise his days without honouring yours; all in his character retraces and describes a second self, every feature, even the sound of his voice!

Oh, what friendship can have the same charms, the same perfection, or be so secure, as that of a brother or a sister! Ungrateful towards Providence, shall we then despise the real blessings so lavishly bestowed on us, to search for those which are chimerical! Whoever loves not those whom he should naturally love, possesses only a false sensibility, and will never be worthy of inspiring a true and solid attachment. GENLIS.

SEPTEMBER THE TWENTY-THIRD.

Beauty and Variety of Nature. (A Sunday Lesson.)

To illustrate this subject, I might cull the choicest flowers which poetry or painting has gathered from the lap of Nature. I might lead you, in imagination, through some rich and varied landscape, where your eye should be delighted with verdant meads and flowery lawns, and your ear soothed with the murmur of streams, or enchanted with the music of the groves. I might represent before you, in succession, the diversified beauties of cheerful Spring, of fruitful Summer, of plenteous Autumn, and of Winter clothed in her silver robe of snow. I might conduct you through the leading classes of the vegetable and animal world, and call upon you to remark in each the distinct beauties of colour, form, proportion, animated motion, and grace. But this is a detail which your own

imaginations will easily supply. Let it suffice, then, upon this head, to remark, in general, that the colouring of beauty, which is so liberally spread over the productions of Nature, is as real, though not perhaps so striking a proof of the power, wisdom, and goodness of the Great Creator, as are the lines of grandeur and sublimity.

The variety which appears in Nature, is the offspring, not of confusion but of order. Though the forms of individual beings are finely diversified, so that it is perhaps impossible to find, in the whole compass of Nature, two organized bodies perfectly alike; yet amidst this boundless variety we may observe the most perfect regularity.

This regularity is of two kinds, that of gradation, and that of arrangement. That of gradation chiefly appears in animated Nature, where beings possess different powers and faculties, through a long succession, each holding his proper place in the scale of excellence. That of arrangement prevails through the whole visible world; each individual possessing some qualities or characters, in common with some others, which enable the spectator to consider them as belonging to the same species or kind; and each species partaking with some others of common appearances, by means of which they may be classed under some general description; till at length we arrive at the three comprehensive divisions under which all the bodies which belong to this earth are commonly arranged — animals, vegetables, and minerals.

ENFIELD.

SEPTEMBER THE TWENTY-FOURTH.

History and Progress of Agriculture.

AGRICULTURE was undoubtedly practised in the most remote ages of the world. As mankind advanced from a state of nature, their necessities increased, and invention made improvements on spontaneous vegetation. Even in our own country, compared with the spontaneous produce of Italy, Nature has been sparing of her gifts; for few of the necessities of life flourish without the most unremitting industry. By nature our apples are crabs, and our plums are only sloes. But art and labour have changed the scene, and healthful exercise has brought this kingdom to an unequalled situation of splendour and plenty.

The period when the yeomanry of England began to feel the benign effects of freedom was in the reign of Henry VIII., after the dissolution of the monasteries; when, the heavy yoke of church-tyranny being removed, all degrees of people, from the peer to the peasant, began to see the happy effects of cultivation. Several acts of parliament were then passed for inclosing waste-lands, improving the breed of cattle, and other excellent purposes; which show of what importance the legislature considered agriculture.

It is evident that tillage was widely extended at that time; for most of the woodlands in the interior part of the kingdom bear visible traces of the plough; and there are but few sheep-walks that have not the marks of former cultivation. Rye was then in general use for bread, either alone, or mixed with wheat.

Dividing and inclosing waste-lands and commons continued till the reign of Edward VI.; when improvement received a severe check by a number of persons riotously assembling in various parts of the kingdom, and pulling up the fences, laying waste and destroying what industry and judicious management had effected. This circumstance, and the unsettled state of the nation, rendered the improvements in agriculture very slow in their progress during the troublesome reign of queen Mary, and the former part of that of Elizabeth.

Fitzherbert, a judge of the common pleas in 1525, was the first person who wrote on the subject of agriculture in England. The celebrated botanist Gerrard, in the latter part of the reign of queen Elizabeth, was the first who taught the culture of potatoes. Some translations from the French and other languages made their appearance about this time; containing, however, so little to the purpose, that it is obvious this country possessed a superiority in agriculture even at this period.

From the beginning of James I. to the end of Charles I. hardly any thing respecting husbandry can be collected. Since the Revolution, however, and particularly during the present reign, agriculture has been constantly and wonderfully improved. Societies for its encouragement have been formed in every part of the empire; and every thing that money, industry, and genius can effect, has of late years been done.

Among the writers who deserve notice for promoting these improvements, the name of Young will ever be illustrious for his *Farmer's Calendar*, a work which has ren-

dered greater service to Britain than any volume that ever was printed.

SEPTEMBER THE TWENTY-FIFTH.

Nature and Phenomena of Light.

THE rays of light are small particles of matter or vibrations of media emitted or proceeding from the sun, or any luminous body, with a velocity so great as to enable them to move at the inconceivable rate of eleven millions of miles in a minute. Eight of these particles or waves following each other in a second of time, or at the rate of 480 in a minute, render any point visible to the eye; yet such is the velocity of light, that those particles, notwithstanding the rapidity of their succession, will be 24,000 miles asunder.

They are supposed to be of different sizes or intensities: the larger and grosser rays produce red and orange colours, and the smaller ones blue and violet. A compound of all the rays produces white, and from the absence of the whole arises black.

All objects are made visible to our sight by the *reflection* of the rays or pulsations of light which fall on them from some luminous body: and accordingly as the greater or smaller rays are absorbed, or reflected, arises the colour of the object viewed.

There is one property of light, called *refraction*, which admits of a very easy and familiar illustration, and will account for a very common but seemingly extraordinary phenomenon. When a ray of light passes out of one medium into another it is refracted, or turned out of its first course, according as it falls more or less obliquely on the refracting surface which divides the two mediums. — Any person may prove this by the following experiment: Put a shilling in an empty basin, and retire to such a distance that the edge of the basin shall hide it from your sight: then, keeping yourself steady, let another person fill the vessel gently with water: and as the water rises toward the top, the shilling will become more and more visible, till at length the whole of it will be distinctly seen, appearing as if it had been raised above the bottom of the basin.

This shows that the rays of light are refracted, or bent downward, in their passage out of the water into the air; and as they now come to the eye in a more oblique direction, the object must necessarily appear to be elevated; and in a different situation from that in which it was really placed. The less obliquely the rays fall, the less they will be refracted; and if they fall perpendicularly they will not be refracted at all.

On this principle of *refraction* depends the construction of telescopes, opera-glasses, and several other optical instruments. On the principle of *reflection* depends the construction of mirrors of all kinds.

SEPTEMBER THE TWENTY-SIXTH.

On the Tea Plant.

OF all the vegetable productions of China, the tea plant deserves particular notice, as its leaves afford by infusion a favourite liquor, which is used daily among us by people of all ranks and condition.

This shrub, which seems to be a species of myrtle, seldom grows beyond the size of a rose-bush, or at most six or seven feet in height. It thrives best in a gravelly soil, and is usually planted in rows upon little hills about three or four feet distant from each other. Its leaves are long, narrow, tapering to a point, and indented like rose or sweet-brier leaves. The shrub is an evergreen, and bears a small fruit containing several round blackish seeds, about the bigness of a large pea, but scarcely above one in a hundred comes to perfection. By these seeds the plant is propagated, nine or ten of them being put into a hole together: and the shrubs thence arising are afterwards transplanted into proper ground. They thrive best when exposed to the south sun, and yield the best tea; but there is a sort that grows without cultivation, which, though less valuable, often serves the poorer class of people.

The Chinese know nothing of imperial tea and several other names, which in Europe serve to distinguish the goodness and price of this fashionable commodity. In fact, though there are various kinds of tea, they are now generally allowed to be the product of the same plant, differing only in colour and fragrance, according to the difference of soil, the time of gathering, and the method of preparation.

The bohea tea chiefly differs from the green by its being gathered six or seven weeks sooner, when the plant is in full bloom, and the leaves full of juice ; whereas the other, by being left longer on the tree, loses a great part of its juice, and contracts a different colour, taste, and virtue. The bohea tea is gathered the beginning of March ; the bing, or imperial, in April ; and the single, or green, in May or June. During all the months of gathering, the leaves on the top of the shrub are the finest and dearest, and are gradually coarser towards the bottom of the plant.

The bohea is first dried in the shade, and afterwards exposed to the heat of the sun ; the green is dried in the sun as soon as gathered ; and both are afterwards convolved or shrivelled up in earthen pans over a slow fire.

It is very rare to find tea perfectly pure, the Chinese themselves generally mixing other leaves with it to increase the quantity ; though the price among them is usually threepence a pound, and never exceeds ninepence.

Bohea tea, if good, is all of a dark colour, crisp and dry, and has a fine smell : green tea is always to be chosen by its crispness, fragrancy, and light colour with a bluish cast ; for it is not good if any of the leaves appear dark or brown. The essential qualities of tea reside in its fragrant and volatile parts.

Tea was introduced into Europe in the year 1610 by the Dutch East India company. In 1666 it was sold in London at sixty shillings a pound.

SEPTEMBER THE TWENTY-SEVENTH.

A Chemical Lecture on Tea-making.

TUTOR. You have assisted in tea-making a great many times, and yet perhaps never considered what kind of an operation it was.

Pupil. An operation of cookery — is it not ?

Tutor. You may call it so ; but it is properly an operation of chemistry. There are, indeed, many things in common life that belong to the deepest of sciences. Making tea is the chemical operation called *infusion*, which is when a hot liquor is poured upon a substance in order to *extract* something from it. The water, you see, extracts from the tea-leaves their colour, taste, and flavour

Pupil. Would not cold water do the same ?

Tutor. It would, but more slowly. Heat assists almost

all liquors in their power of extracting the virtues of herbs and other substances. The liquor in which a substance has been boiled is called a *decoction* of that substance. Broth is a decoction, and so are gruel and barley-water. But when any thing is put to steep in a cold liquor it is called *maceration*. The ingredients of which ink is made are macerated. In all these cases the whole substance does not mix with the liquor, but only part of it. The reason is, that part of it is soluble in the liquor, and part not. *Solution* is when a solid put into a fluid entirely disappears in it, leaving the liquor clear. Thus, when I throw this lump of sugar into my tea, it gradually wastes away till it is all gone : I can taste it in every single drop of my tea ; but the tea remains as clear as before.

Pupil. Salt will do the same.

Tutor. It would. But if I were to throw in a lump of chalk it would lie undissolved at the bottom. While it was stirred it would make the water white, and then it would be a *diffusion*. But while the chalk was thus mixed with the liquor, it would lose its transparency, and not recover it again till by standing the chalk had all subsided, and left the liquor as it was before.

Pupil. How is cream mixed with the tea ?

Tutor. Why, that is only diffused ; for it takes away the transparency of the tea : but the particles of cream being finer and lighter than those of chalk, it remains longer *united* with the liquor. However, in time the cream would separate too, and rise to the top, leaving the tea clear. If a mixture of sugar, salt, chalk, and tea-leaves, were thrown into water, either hot or cold, and left to stand, the clear liquor would contain in solution sugar, salt, and those particles of the tea in which its colour and taste consisted ; the remainder of the tea and the chalk would lie undissolved. If the tea-leaves were dried they would be found to have lost part of their weight, and the water would have gained it. Sometimes it is an extremely small portion of a substance that is soluble, but it is that in which its most remarkable qualities reside. Thus a small piece of spice will communicate a strong flavour to a large quantity of liquid, with very little loss of weight.

Pupil. Will all liquors dissolve the same things ?

Tutor. By no means. Many dissolve in water that will not in spirit of wine ; and the contrary. And upon this difference many curious matters in the fine arts are founded. Thus spirit varnish is made of a solution of va-

rious gums or resins in spirits, that will not dissolve in water. Therefore, when it has been laid over any surface with a brush, and is become dry, rain or moisture will not affect it. This is the case with the beautiful varnish laid upon coaches.

AIKAN.

SEPTEMBER THE TWENTY-EIGHTH.

On the Buildings of the Beavers

IF a man who has never heard of the industry of beavers, and their manner of building their houses, were to see some of their edifices, he would, no doubt, suppose them to be the work of several eminent architects. Every thing is wonderful in the labours of these amphibious animals. The regularity of their plan, the size and solidity and the admirable contrivance of their buildings, must fill every attentive observer with astonishment.

The beavers choose a place to build on, where they can have plenty of provision, and near a rivulet, that they may have water to bathe in. They begin by making a bank or dyke, which keeps the water on a level with the first floor of their houses. Sometimes the bank is a prodigious work : at the bottom it is about ten or twelve feet thick ; it is formed entirely of wood and clay. The beavers cut pieces of wood, as thick as an arm, with astonishing ease. These they fix upright in the ground, very close to each other, and interweave between smaller and more supple pieces of wood. But as the water would get through, and their bathing pond would be empty, they have recourse to clay or potter's earth, with which they fill all the spaces within and without, so that the water cannot run through. They raise the dyke as the water rises.

Having finished the bank of their watering-place, they begin their houses, which are round or oval buildings, divided into three stories, raised one above another. The lower one is generally filled with water ; the other two are raised above it. They fix these little buildings in a very firm and strong manner, upon the edge of their watering-place, and always by stories, in order to mount higher in case the water should rise. If they find a little island near their pond, they build their houses upon it, which are then more solid ; and they are less incommoded with water, in which they cannot remain long at a time. If they do not find this convenience, they, with the

help of their teeth, put piles into the ground, in order to support their buildings against the wind and the water. They form two doors at the bottom, in order to go out into the water: one leads to their bathing-place, the other to the place where they deposit whatever is disagreeable from their upper apartments. They have a third door higher up, for fear of being taken when the ice blocks up the lower doors.

Sometimes they build their houses entirely on dry ground; and make ditches from five to six feet deep, to go down into the water. They employ the same industry, and the same materials for their building, as for their dykes. The walls are perpendicular, and two feet thick. The ends of the wood, which go beyond the level of the wall, they cut off with their teeth: then mixing clay with dry herbs, they form it into a composition, with which they plaster both inside and outside of their work by the help of their tails, which serve as trowels. The inside of the house is arched, and its size is regulated by the number of inhabitants that are to dwell in it. Twelve feet long, by eight or ten feet broad, is a space sufficient for eight or ten beavers. If the number be greater, the building is enlarged in proportion.

The instruments the beavers make use of, are four strong and sharp teeth, the two fore-feet, the toes of which are separated, the two hind-feet, the toes of which are connected with a membrane, and their tail, which is covered with scales, and formed like an oblong trowel. With these few utensils, they shame our carpenters and masons, provided as they are with trowels, rules, squares, and axes. They cut all the wood they require for building with their teeth, with their fore-feet they dig the ground, and soften and mix the clay; their tails serve instead of a wheelbarrow to carry their clay or mortar, and afterwards as a trowel to plaster it on.

GOLDSMITH.

SEPTEMBER THE TWENTY-NINTH.

On the Insect Tribes.

NATURALISTS have found it necessary to arrange insects into different tribes or families, distinguished from each other by certain peculiarities in the structure of their bodies; such as their having or wanting wings, and from the number and substances of which these instruments of motion are composed.

No other classes of animals have more legs than four ; but most insects have six ; and some have eight, ten, fourteen, sixteen, and even a hundred. Besides the number of legs, insects are furnished with *antennæ* or feelers. These feelers, by which they examine the substances they meet with, are composed of a greater number of articulations or joints. When a wingless insect is placed at the end of a twig, or in any situation where it meets with a vacuity, it moves the feelers backward and forward, elevates, depresses, and bends them from side to side, and will not advance further lest it should fall. If a stick or any other substance be placed within the reach of the feelers, the animal immediately applies them to this new object, examines whether it is sufficient to support the weight of its body, and in that case instantly proceeds in its journey.

Though most insects are provided with eyes, yet they can see distinctly but at small distances, and of course must be very incompetent judges of the vicinity or remoteness of objects. The feelers, which are in perpetual motion while the animal walks, remedy this defect, and enable it to proceed with safety in the dark.

Some of the insect tribes have four, and others, as the spider and scorpion, have eight eyes. The eyes of insects are absolutely immoveable ; but this defect is supplied by a contrivance which renders them capable of viewing objects in every direction, and also of seeing bodies that are too minute to be perceived by us.

There is another peculiarity in the structure of insects. They have no bones : but that defect is supplied in some by a membraneous or muscular skin, and in others by a crustaceous or horny covering. In this circumstance insects resemble the shell animals, whose bones constitute the outward parts of the bodies.

The mouth of insects is generally placed in the under part of the head ; but in some it is situated in the breast. The greater number of winged insects are provided with a proboscis or trunk, a machine of a very complicated nature, which serves them to extract the juices from plants, to conduct the air into their bodies, and to convey the sensation of smelling. The substance of the trunk has some resemblance to that of horn. It tapers from the base to the extremity, and is composed of two similar and equal parts, (each of them concave,) which when joined form three distinct tubes, that serve as a mouth, a nose, and a windpipe.

MAJOR.

SEPTEMBER THE THIRTIETH.

Connection of the Works of Nature.

(A Sunday Lesson.)

THE law of mutual dependence so universally prevails, that through all the parts of Nature which come under our notice, and probably throughout the creation, there is not to be found a single insulated, unconnected being. It is true, in numberless instances, that the parts of the material world are dependent upon each other for their preservation. The nourishment of plants is the joint labour of the sun and air, earth and water ; and even the continuance of their several species requires that plants of the same order be associated in the same soil. Animals depend upon vegetables, or upon animals of an inferior size or lower order, for their support ; and in their respective classes are often mutually subservient to each other.

Man requires large supplies from the vegetable, animal, and mineral kingdoms, for his support, defence, convenience, and amusement ; and in return is under the necessity of cultivating the earth, and of protecting and providing for the creatures whose service he needs. Among men, every relation of society is a mode of dependence, and all the offices of life are reciprocal acts of kindness. As, in the human body, the eye cannot say to the hand, I have no need of thee ; nor again, the head, I have no need of you ; so in the general body of society, no individual can claim independence on his brethren.

If the value of every work depends upon the importance of the end it is designed to answer, and the degree of perfection with which it accomplishes that end, the works of God are glorious and excellent, and, to say all in one word, worthy of their author. The best design which can be conceived, is that of producing happiness. The most exalted conception which can be supposed to enter into the Divine mind, is that of blessing a universe. This vast and exalted design is written in legible characters upon the whole face of Nature. Every intelligent, every percipient being is, by the structure of his frame, and the faculties with which he is endued, created for happiness. Abundant provision is made in the material world, and in the general nature and tendencies of things, for producing universal felicity. We may therefore reasonably presume, that

every occurrence which seems at present to interrupt this great design, is only a temporary appearance, which, for want of seeing the whole extent of the Divine plan, we cannot explain; and that all partial evil terminates in universal good.

After this survey of the leading characters of the works of God, which of us will not be disposed to adopt, with devout admiration, the language of our divine poet?

These are thy glorious works, Parent of good,
Almighty: thine this universal frame,
Thus wondrous fair; thyself how wondrous then;
Unspeakable! who sitt'st above these heavens
To us invisible, or dimly seen
In these thy lowest works. — Yet these declare
Thy goodness beyond thought, and power divine.
ENFIELD

OCTOBER THE FIRST.

Phænomena of the Month of October.

PLANTS having gone through the progressive stages of springing, flowering, and seeding, have at this season brought to maturity the rudiments of a future progeny, which are now to be committed to the fostering bosom of the earth. This being done, the parent vegetable, if of the *herbaceous* kind, either totally dies, or perishes as far as it rose above ground: if a *tree* or *shrub*, it loses all its tender parts which the spring and summer had put forth. Seeds are scattered by the hand of nature in various manners. The winds, which at this time arise, disperse far and wide many seeds which are curiously furnished with feathers or wings for this purpose. Other seeds, by the means of hooks, lay hold on passing animals, and are thus carried to distant places. Many are contained in berries, which being eaten by birds, the seeds are discharged again uninjured, and grow where they happen to alight. Thus carefully has Nature provided for the distribution and propagation of plants.

The common martin, whose nests, hung under the eaves of our houses, afford so agreeable a spectacle of parental fondness and assiduity, usually disappears in October. As this, though one of the smallest of the swallow-kind, stays the latest, its emigration to distant climates is less

probable than that of the others. The sand-martin, which breeds in holes in the sandy banks of rivers, and about cliffs and quarries, most probably passes the winter in a torpid state in those holes.

In most of the wine-countries of Europe, the *vintage* takes place in October. The grape is one of the latest fruits in ripening. When gathered, they are immediately pressed, and the juice is fermented like that of apples in making cider. A great variety of wines are produced from the different kinds of grapes, and the diversity of climate in which they grow. In England, this fruit does not ripen constantly enough to be worth cultivation for the purpose of making wine.

This month is particularly chosen, on account of its mild temperature, for the brewing of malt liquor designed for long keeping, which is therefore commonly called *old October*.

The farmer continues to sow his winter corn during this month; and wheat is frequently not all sown till the end of it. When the weather is too wet for this business, he ploughs up the stubble-fields for winter-fallows. Acorns are sown for young plantations at this time; and forests and fruit-trees are planted.

At the very close of the month, a few flowers still cheer the eye; and there is a second blow of some kinds, particularly of the woodbine. But the scent of all these late flowers is comparatively faint.

AIKIN.

OCTOBER THE SECOND.

Of the Clothing of Animals.

MAN being endowed with the faculty of reason, having thoughts to contrive, hands to effect, and sufficient materials afforded him from the skins of animals, and from various trees and plants, the Creator of the universe has wisely made him naked, and left him to clothe himself; while the poor shiftless irrational beings are provided with such clothing as is most suitable to their station and business.

Some animals are covered with hair, some with feathers, some with scales, some with shells; some only skin; and some with firm and stout armature; all nicely accommodated to the element in which the creature lives, and to its occasions there.

To some quadrupeds hair is a commodious clothing; which fits them for all weathers, to lie on the ground, and to do the offices required by man; and the thick warm fleeces of others are not only a good defence against cold and wet, but also a soft bed to repose themselves in; and to many, a comfortable covering to nurse and cherish their tender young.

And as hair and wool to quadrupeds, so feathers are as suitable a covering to birds; sufficiently close and strong to guard the body from the injuries of weather, while it empowers the wings, like so many sails, to make strong impulses upon the air in their flight.

How well adapted are the *annuli* of some reptiles, and the contortions of the skin of others, not only to fence the body sufficiently against outward injuries, but to enable them to creep, to perforate the earth, and in a word to perform all the offices of their reptile state, much better than any other tegument of the body would do!

The same may be said of the covering of the inhabitants of the waters, particularly the shells of some most consistent with their slower motions, and the scales and skins of others affording them an easy and swift passage through the waters.

Thus is the whole animal world clothed in the wisest manner, the most suitable to the element in which they live, the place in which they reside, and their state and occasions there. Those that are able to shift for themselves, are left to their own discretion and diligence; but the helpless are well accoutred and provided for. When such inimitable glory and beauty are seen in the clothing of some, and such incomparable contrivance and workmanship appear in all, can we imagine the clothing of all the animal world to be the work of any thing less than of the infinite, intelligent Being, whose art and power alone are equal to such a wonderful and admirable contrivance?

DERHAM.

OCTOBER THE THIRD

Of the Dog.

THE dog, independently of his beauty, vivacity, strength, and swiftness, has all the interior qualities which can attract the regard of man. The tame dog comes to lay at his master's feet his courage, strength, and talents, and

waits his orders to use them; he consults, interrogates, and beseeches; the glance of his eye is sufficient; he understands the signs of his will; without the vices of man, he has all the ardour of sentiment, and what is more, he has fidelity and constancy in his affections; no ambition, no interest, no desire of revenge, no fear but that of displeasing him; he is all zeal, all warmth, and all obedience; more sensible to the remembrance of benefits than wrongs, he licks the hand which inflicts pain on him; he only opposes punishment by his cries, and at length entirely disarms anger by his patience and submission.

More docile and flexible than any other animal, the dog soon conforms himself to the motions, manners, and habits of those who command him. When the care of the house is entrusted to him during the night, he becomes even ferocious; he watches, he walks his rounds, he scents strangers afar off, and if they happen to stop, or attempt to break in, he flies to oppose them, and by reiterated barkings, efforts, and cries of passion, he gives the alarm. As furious against men of prey as against devouring animals, he flies upon, wounds, and takes from them what they were endeavouring to steal; but content with having conquered, he rests himself on the spoil, will not touch it even to satisfy his appetite, and at once gives an example of courage, temperance, and fidelity.

This species of animal is of the greatest importance in the order of Nature: without the assistance of the dog, how could man have been able to discover, hunt, and destroy, wild and obnoxious animals? To keep himself in safety, and to render himself master of the living universe, it was necessary to make himself friends among animals, in order to oppose them to others. The first art, then, of mankind, was the education of dogs, and the fruit of this art was the conquest and peaceable possession of the earth.

The dog, faithful to man, will always preserve a portion of empire, and a degree of superiority over other animals: he commands them, and reigns himself at the head of a flock, where he makes himself better understood than the voice of the shepherd: safety, order, and discipline, are the fruits of his vigilance and activity. The sheep are a people who are submissive to him, whom he conducts and protects, and against whom he never employs force, unless it be to maintain peace.

The dog may be said to be the only animal whose fidelity to man can be put to the proof; the only one which

perceives the approach of an unknown person; the only one which always knows his master and his friends; the only one which understands his own name, and answers to the domestic call; the only one which, when he has lost his master and cannot find him, calls him by his lamentations; the only one which, in a long journey, a journey that perhaps he has been but once, will, if lost or taken from his home, remember the way, and find the road back to his owner; the only one, in short, whose talents are evident, and who is susceptible of every good impression.

BUFFON.

OCTOBER THE FOURTH.

Winter Sleep of Animals and Plants.

THE winter sleep is a very singular property of animals and plants: and, though it occurs daily before our eyes, we are not able to explain the phenomena with which it is attended. In cold countries, many animals, on the approach of winter, retire to their subterranean abodes, in which they bury themselves under the snow, where they remain five or six months without nourishment or motion; nay, almost without circulation of their blood, which flows only sluggishly, and in the widest vessels. Their perspiration is almost imperceptible: but still they lose something by it; as they enter their winter quarters in very good condition, and are exceedingly thin when they return from them.

Some animals enjoy their winter sleep under the earth, and others concealed beneath the snow; some for the same purpose creep into the holes of rocks, and others under stones or the bark of trees.

Plants have their winter sleep also; for, during the period of winter, their sap flows towards the root, and the circulation of it, which is very slow, takes place only in the widest vessels. Were the expansion of the sap in winter as considerable as in summer, it would burst all the vessels on being frozen.

Several observers have endeavoured to prove that this singular circumstance is merely accidental, and, indeed, no difference is found in the internal organisation of those animals which have winter sleep, and those which have not. It is very remarkable, that this property belongs in general to animals of prey. As these have far stronger

powers of digestion, and stronger digestive juices, it would appear that abstinence from food for several months would to them be hardly possible.

The bear, the bat, and the hedge-hog, have winter sleep, but the white bear has not. As the latter is secured from the cold by his long hair, he finds nourishment in the dead whales and seals which are cast on shore by the waves.

The earth-worms have winter sleep; but aquatic worms very seldom. Insects, as well as their larvæ, have winter sleep. Butterflies may be often seen fluttering about in the warm days of spring, after having spent the whole winter in that condition. Amphibious animals have winter sleep, those which live merely in the ocean excepted. Few birds, on the other hand, are exposed to this state. The greater part of these, on the approach of winter, retire to a milder climate, where they can find more abundant nourishment. In Iceland, the sheep have winter sleep, because in that country they are suffered to range in perfect freedom. In the winter season, therefore, they may be seen buried under the snow and in the bushes, where it would be impossible for them to remain were they not in that condition.

OCTOBER THE FIFTH.

On the Sense of Feeling, and the Faculty of Speech.

To the senses of seeing, hearing, smelling, and taste, as a most necessary and advantageous supplement, is added that of *feeling*, which renders the whole assemblage complete. While the other senses have local situation, this is diffused throughout the whole body—in the palms of the hands, on the tips of the fingers, and through all the extreme parts of the flesh.

How happily is this sense tempered between two extremes: neither so acute as the membranes of the eye, nor so obtuse as the callus of the heel. The former would expose us to much pain, the latter would quite benumb the body, and almost annihilate the touch.

Each sense is most exactly adapted to its respective office, and to the several exigencies of our present state. Were they strained to a much higher tone, they would be avenues of anguish; were they relaxed into a greater insensibility, they would be so many useless incumbrances.

That which improves the satisfaction, and augments the beneficial effects arising from all the senses, is the won-

derful faculty of *speech*. What an admirable instrument for articulating and modifying this great blessing, is the tongue! that artificer of our words, which, without either bone or joint, fashions itself into every shape and posture that can express sentiment, or constitute harmony. By this organ we communicate the secrets of our hearts, and make our very thoughts audible; are enabled to instruct the ignorant, reclaim the vicious, and comfort the distressed.

Besides the bodily perfections already instanced, we have powers of *imagination*, by which we are rendered capable of the pleasures arising from the perception of harmony, order and beauty. We have *memory*, by which we are able to recall past scenes and enjoyments. We have a *capacity* of looking forward to futurity; and thus of guarding against expected evils, and alleviating present inconveniences, by the anticipations of hope. We have *language*, by which we make known our wants, and enjoy the benefits of social intercourse. We have *affections*, which procure us the joys flowing from love and sympathy; from friendship, generosity, and mutual kindness. We have *reason*, by which we can investigate truth, can trace the Divine hand that formed us; contemplate his works, and cause all Nature, and every inferior order of being, to contribute to our defence and comfort.

We have *liberty* and *conscience*, by which we can perceive the eternal differences of moral good and evil; and, by conforming our actions to them, procure the inexpressible satisfaction arising from self-applause, the consciousness of imitating the Deity, and the hope of receiving his approbation and favour.

————— Of all

The inhabitants of earth, to man alone
Creative wisdom gave to lift the eye
To Truth's eternal measures, thence to frame
The sacred laws of action and of will,
Discerning justice from unequal deeds,
And temperance from folly.

AKENSIDE.

OCTOBER THE SIXTH

The principal Manufactures in England.

THE staple manufacture of this country is woollen cloth. England abounds in fine pastures and extensive downs, which feed great numbers of sheep: hence our

wool has ever been a valuable article of trade; but we did not always know how to work it. We used to sell it to the Flemish or Lombards, who wrought it into cloth: till in the year 1326, Edward III. invited some Flemish weavers over to teach us the art: but there was not much made in England till the reign of Henry VII.

Manchester and Birmingham are towns which have arisen to great consequence from small beginnings, almost within the memory of old men now living; the first for cotton and muslin goods; the second for cutlery and hardware, in which England excels all Europe.

Of late years, too, fine and beautiful carpets have been fabricated in this country. Our clocks and watches are also greatly esteemed.

The earthenware plates and dishes in general use, with the more elegant and ornamented sets for the dinner and tea tables of the wealthy, come from a very extensive manufactory, the seat of which is at Burslem in Staffordshire.

The principal potteries there belong to one manufacturer, Wedgwood, who has made our clay more valuable than the finest porcelain of China. He has moulded it into all the forms of grace and beauty that are to be met with in the precious remains of the Greek artists. In the more common articles he has pencilled it with the most elegant designs, shaped it into shells and leaves, twisted it into wicker work, and trailed the ductile foliage round the light basket. He has filled our cabinets and chimney-pieces with urns, lamps, and vases, on which are traced the fine forms and floating draperies of antiquity. There is a great demand abroad for this elegant manufacture.

The highest value of exports from Great Britain was in 1810, when they exceeded sixty-two millions. Of this amount, fifteen millions were foreign goods re-exported, and forty-seven millions were British produce or manufacture, of which twenty millions were sent to our colonies in Asia, Africa, and America. The cotton manufactories consume seventy-eight millions of pounds of raw cotton annually, and their total value is twenty-five millions of pounds sterling, of which fifteen millions are exported.

OCTOBER THE SEVENTH.

Against Sloth. (A Sunday Lesson.)

THE whole structure of our nature, and the whole condition of our being, prove that our Maker intended us

not for a life of indolence, but of active exertion. All the organs of the body, and all the faculties of the mind, are instruments of action, and are to be employed in the vigorous pursuit of happiness. It is only by constant exercise that these powers can be preserved in a sound and healthful state. If the body be suffered to remain long inactive, it will lose its strength, and become a prey to disease; at the same time the mental faculties will be gradually enfeebled, and the whole fabric of human happiness be undermined by fretfulness and spleen. It is, on the contrary, a matter of constant experience, that a regular course of bodily exercises is conducive to health, exhilarates the spirits, and contributes to the easy and successful employment of the intellectual powers.

The frequent application of the mind to study, establishes a habit of thinking, which renders it easy and pleasant to engage in any kind of scientific or literary pursuit; whereas a mind which remains long unemployed, loses its delicacy and vigour, and sinks into languor and stupidity. As the earth, if it be industriously cultivated, will produce fruits in rich abundance, but, if it be suffered to lie long untilled, will be overrun with weeds, which will be rank in proportion to the richness of the soil: so the human mind, if cultivated with great assiduity, will yield a plentiful harvest of knowledge and wisdom; but if neglected, will soon be overspread with the weeds of error and folly: and the poisonous weeds will spring up in the greatest abundance in those minds which are by nature capable of producing the most excellent fruits.

To a mind thus corrupted by indolence, the words of Solomon may be applied: "I went by the field of the slothful, and by the vineyard of the man void of understanding, and lo, it was all grown over with thorns, and nettles had covered the face thereof." The unquestionable truth is, that man is made for action; and his faculties, like metallic instruments, if they be not polished with using, will be consumed with the rust of indolence.

ENFIELD,

OCTOBER THE EIGHTH.

Religious Intolerance.

ALL religious parties and sects are persuaded of their own infallibility. Each cherishes the unhappy opinion, that, among the many religious professions, there is only

one which possesses theological truths in all their purity; each despises and abhors the rest, and accuses them of obstinacy, blindness, obduracy, and deceit. Each sect imagines itself to be in the right way, and all the others in error. Every man of a shallow mind is proud of his intolerance, and regards every thing that does not correspond with his tenets, as detestable and impure.

It is too often the case that the enemies of a religion hate it because they are not acquainted with it. They ascribe to their opponents principles which they abhor, and tenets which never entered into their imaginations. They propagate the most religious calumnies against the professors of the obnoxious religion. A Franconian catholic of high rank, in the true spirit of religious intolerance, gave this caution to his son when setting out on his travels: My son, said the illustrious bigot, avoid the society of the protestant ecclesiastics, for they are all addicted to abominable crimes.

In the eyes of the Turks all infidels are dogs, whose presence alone is sufficient to pollute an orthodox mussulman. For this reason no Christians are permitted to reside in the country of Ilisiaos, because the cities of Mecca and Medina form a part of it. Neither Jews nor Christians are allowed to be present in Egypt at the opening of the canals of the Nile, lest, by their impurity, they should prevent the overflowing of its waters.

The Mahomedans are unjust towards the Christians, and the Christians towards the Mahomedans. No Turk ever entertained the least doubt concerning the unity of the Godhead; and yet they have been accused of worshipping the stars, and in many Christian books they are termed Pagans.

Thus mankind, more or less, shun and despise, ridicule and condemn one another, because each professes the only saving religion. Thus the crusades swept away two millions of combatants; and they were undertaken in the true spirit of intolerance, for the extermination of infidels, and for a confirmation and extension of the true faith. Thus have princes been stimulated to convert the world into a hell, and in the name of a God of mercy to persecute and torment those whom they ought to have treated with love and compassion. Whoever imagines that another cannot possibly be a virtuous man who does not believe all that he believes; whoever condemns all those whose way of thinking in religious matters does not correspond with his,

will naturally be an enemy to the greatest part of his species.

Men ought not thus lightly to condemn each other. — We shall be judged by a God of love: he will judge us according to the faithfulness and sincerity with which we serve him. The hope of salvation is not grounded on a man's faith, but on his sincerity; not on his opinions and knowledge, but on the worthiness, purity, and integrity of his heart and life.

ZIMMERMAN.

OCTOBER THE NINTH.

Further Observations on Animalculæ.

THE word *animalculæ* denotes such a minute creature as is either scarcely, or not at all, to be discerned by the naked eye. The green coating on the top of stagnant waters is nothing but prodigious numbers of animalculæ, which serve for nourishment to several water-animals.

The microscope discovers millions of animalculæ in most liquors, as water, wine, vinegar, beer, dew, &c. particularly in rain-water, in several mineral waters, and in infusions of pepper, bay-berries, oats, barley, and wheat.

Animalculæ may be considered as visible, invisible, or microscopical. The *visible*, or such as may be discerned by the naked eye, are mites, divers species of insects, reptiles, and other vermin. The *invisible*, which are only supposed to exist, are such as escape the power even of the best microscopes. The naked eye takes in from the elephant to the mite: but here commences a new order, reserved only for the microscope, which comprehends from the mite to those twenty-seven millions of times smaller and this order cannot be yet said to be exhausted, if the microscope is not already arrived at its highest possible degree of perfection.

The extreme minuteness of these animalculæ conceals them from the naked human eye. This is one of the great wonders of modern philosophy. An object a thousand times too little to be able to affect our sense, would, it might formerly be thought, have been secure from our inspection. And it is strictly true, that most of our microscopical animalculæ are so inconceivably small that thousands may stand on the point of a needle.

With whatever degree of surprise we consider the huge bulk and prodigious strength of the elephant, we shall find

our astonishment still greater if we attentively examine the minute parts of the mite; for the latter has more limbs than the elephant, each of them furnished with veins and arteries, nerves, muscles, tendons, and bones: it has eyes, a mouth, heart to propel the circulation of the blood, and organs as perfect as in the largest animal. If the extreme minuteness of these parts is above our conception, what shall we say to those various species of animalculæ, to which the mite itself, in size, is as it were an elephant!

OCTOBER THE TENTH.

On the Arts.

THE arts are generally divided into two classes; useful or mechanic, and liberal or polite. The mechanical arts are those in which the hand and body are more concerned than the mind: of this kind are most of those which furnish us with the necessaries of life, and are popularly known by the name of trades; as baking, brewing, carpentry, smithery, weaving, &c.

Polite arts are such as depend more on the labour of the mind, than that of the hand; and are the produce of imagination; their essence consists in expression, and their end in pleasure. Under the denomination of polite arts, are comprehended oratory, poetry, music, painting, sculpture, engraving, and architecture.

Some of the polite arts, such as eloquence, poetry, and architecture, are frequently applied to objects that are useful, or exercised in matters that are instructive: but in these cases, though the ground-work belongs to those sciences which employ the understanding, yet the expression arises from the faculty of invention.

Some of the arts must be nearly coeval with the human race; for food, clothing, and habitation, even in their original simplicity, required a degree of skill; and many others are of such antiquity as to place the inventors beyond the reach of tradition.

Mechanical arts in process of time introduced polite arts; for the professors of the former, having introduced the conveniences, turned their thoughts towards the embellishments of life. Beauty was studied in objects of sight; and men of taste attached themselves to the fine arts, which multiplied their enjoyments and improved their benevolence.

The imitative arts of sculpture and painting made an early appearance in Greece. Statuary, a more simple imitation than painting, was soonest brought to perfection: the statues of Jupiter by Phidias, and of Juno by Polycletes, were executed long before the art of light and shade was known. Another cause likewise concurred to advance statuary before painting, namely, the great demand for statues of the gods.

In all countries where the people are barbarous and illiterate, the progress of the arts is extremely slow. Useful arts will never be neglected in a country where there is no polity, for every man finds his account in them. Fine arts are more precarious; they are not relished but by persons of taste, who are comparatively very few; for which reason they will never flourish in any country, unless patronised by the sovereign, or by men of power and opulence.

OCTOBER THE ELEVENTH.

Ceremonies of the Chinese.

NOTHING can appear more irksome to an European than the multitude of ceremonies used on all occasions by the Chinese. An invitation to an entertainment is not supposed to be given with sincerity till it has been renewed three or four times in writing. A card is sent on the morning preceding the entertainment, a second on the morning of the appointed day, and a third when every thing is prepared.

The master of the house always introduces his guests into the hall, where he salutes them one after another. When they are all assembled, he takes a cup of wine, makes a bow to the company, advances to the fore-part of the hall, and, raising his eyes and the cup towards heaven, pours the liquor on the ground, in imitation of the well-known libations of antiquity.

The whole entertainment is conducted with the utmost formality. They all drink together very slowly. No one presumes to begin to eat till the master of the feast leads the way; but on his giving the accustomed signal, all the company snatch up their ebony sticks, and carry the food to their mouths in regular uniform motion, as if they were performing some military exercise. They take the greatest care that their mouths all move together; for to be

before-hand, or to make the rest wait, is accounted a mark of vulgarity.

The ceremonies of the Chinese are under the immediate direction of government, and every person in the empire is obliged to observe them. Even tradesmen, mariners, husbandmen, and domestics, have their respective forms assigned them; and every one, from the highest mandarin to the most indigent peasant, is perfectly acquainted with the honours and compliments he can properly accept, and those which he ought to pay to others. It is supposed by the court, that the frequent use of outward condescensions and seeming affection tends to promote mutual good will, and prevents many quarrels and disorders.

When a visitor arrives at the house of a superior, he is introduced into the hall by a couple of servants, who hold an umbrella and a fan inclined to each other, so as to form a screen; and these barriers are not removed till he has advanced near enough to salute the master of the house, who does not rise from his chair. If the person visited be the inferior, he goes into the street to conduct the stranger in.

Loquacity is studiously avoided in their visits, and sometimes not a single word is spoken, except the prescribed compliments, which are always uttered in the third person. They never say *I* or *You*: such familiar expressions are contrary to their law of ceremonies.

Nor is epistolary correspondence, even among private friends, attended with less complicated ceremonies. If a letter be written to a person of quality, it is necessary to use a large sheet of white paper with ten or twelve folds, and the smaller the characters are the more respectful: the style, words, and distances between the lines must also be accommodated to the rank of the person addressed, and two seals must be affixed to the letter, one over the beginning and the other above the signature. The letter is then folded in a cover, on which is written *Nuy-han*, 'The letter is within;' and this is put into another cover, directed and sealed at both ends, with the words *Houfong*, 'Secured and sealed.'

J. GOLDSMITH.

OCTOBER THE TWELFTH.

The Metamorphoses of Insects.

ALL winged insects undergo *three* metamorphoses or changes of form, and these distinct periods present very different scenes to the student of Nature.

In the *first* period the insect appears as a worm or caterpillar. Its body is long, cylindrical, and consists of a succession of rings, which are generally cased within each other. By the aid of its rings, or of several pairs of legs, it crawls about in quest of food; and its movements are in some species, remarkably quick. Its head is armed with teeth or pincers, by which it eats the leaves of plants or other kinds of food. Its blood moves from the tail towards the head; and it breathes either by small openings placed on each side of its body, or by one or several tubes situated on its posterior part, which resemble so many tails.

In the *second* period, the insect appears under the form of a nymph or chrysalis. When an insect, after throwing off the skin of the caterpillar, exhibits all its external parts, only covered with soft and transparent membranes, it is called a nymph; but when to these membranes is added a common and crustaceous covering, it receives the name of a chrysalis. — While in this second state insects in general are totally inactive, and seem not to possess any powers of life; remaining fixed in the situation which they have chosen for their temporary abode, till their final metamorphosis into flies. Some, however, are capable of changing place, but their movements are slow and painful. The blood circulates now from the head to the tail, and the organs of breathing are found on the anterior part of the animal.

In the *third* period, as a butterfly or moth, the insect has acquired that perfect construction which corresponds to the rank it is destined to hold in the scale of existence. The bonds of the nymph or the chrysalis are now burst asunder, and the insect commences a new mode of life. All its members, formerly soft, inactive, and folded up, are expanded, strengthened, and exposed to observation.

Under the form of a worm, or caterpillar, it crawled; under that of a nymph, or chrysalis, its power of motion was almost annihilated; but under this last form, it is furnished with six springy legs, and two or four wings, with which it is enabled to fly through the air! Instead of teeth or pincers, with which it divided a gross aliment, it has now a trunk, by which it extracts the refined juices of the most delicate flowers: and it delights us by the beauty of its spots and variety of its colours!

OCTOBER THE THIRTEENTH.

Phænomena of the Vegetable Kingdom.

THE power of changing place is not peculiar to animals; examples of different kinds of motion are to be discovered in the vegetable kingdom. When the roots of a tree, for instance, meet with a stone, or any other obstruction to their motion, in order to avoid it they alter their direction. They will turn also from barren to fertile earth, which indicates something like a selection of food; and when confined to a house, they will uniformly bend toward the window or opening through which the rays of light are introduced.

The sensitive plant possesses the faculty of motion in a very eminent degree. On the slightest touch its leaves suddenly contract, and the branch bends towards the earth.

The moving plant from the East Indies exhibits the most astonishing example of vegetable motion. Its leaves are incessantly in movement, some rising and others falling; and others whirling circularly by twisting their stems. Its motions cease during the night, and when the weather is cold and cloudy.

The American plant called Venus's Fly-trap, affords an extraordinary instance of vegetable motion. Its leaves are jointed, and furnished with two rows of strong prickles. Their surfaces secrete a sweet liquor, and allure the approach of flies: but no sooner are they touched by the legs of a fly, than the two lobes of the leaf instantly rise, the rows of prickles lock themselves fast together, and squeeze the unwary animal to death. If a straw or pin be introduced between the lobes, the same motions are excited.

When a seed is sown in a reversed position, the young root turns downward to enter the earth, and the stem bends upward to ascend into the air. Confine a young stem to an inclined position, and its extremity will soon assume its former perpendicular direction. Twist a branch of any tree in such a manner that the inferior surfaces of the leaves are turned toward the sky, and in a short time all these leaves will resume their original position. Many leaves follow the course of the sun. In the morning their superior surfaces are presented to the east; at noon they face the south; and when the sun sets, they are directed to the

west. All plants make strong efforts to escape from darkness and shade, and to procure the influence of the sun.

OCTOBER THE FOURTEENTH.

Youth and Age compared. (A Sunday Lesson.)

To young persons life commonly appears a shining and flowery spring, which yields a thousand present delights, and promises a summer richly laden with precious fruits. They have heard, indeed, that it sometimes happens that storms and tempests rise to darken the brightest sky! and they are told that the summer and autumn of mature life must be at length succeeded by the gloomy winter of age: but they think it wholly unnecessary to damp the ardour of their present pursuits by turning their attention to events so uncertain and apparently so remote.

From these and other causes, young people enter upon life with the most sanguine expectations of finding in every event an inexhaustible fund of delight, and of seeing all their schemes and enterprises crowned with success. They behold Fame standing ready to sound the praise of their talents and merit, and Fortune waiting to reward their industry. Thus delighted with themselves and their prospects, they contemplate human life as an enchanting scene, inviting to action, pregnant with pleasure, and rich in hope; and they wonder at the peevishness and perverseness of those who can find in the world nothing but causes of vexation and complaint.

Such is human life in *prospect*. Let us now for a moment consider how it appears to those who view it in *retrospect*.

The gay illusions of youthful fancy are now all vanished. Through life they have met with many disappointments, perhaps with many heavy calamities. Plans which promised great things have failed. Those in whom they confided have deserted them. With this appearance of the uncertainty and vanity of all earthly possessions, they are at length arrived at the period when youthful strength and beauty are exchanged for feebleness and deformity — when the senses are benumbed, and desire fails.

The companions of their youth having dropped one after another into the grave, what wonder if at fourscore they ask — Where is the world into which we were born? What wonder if, with all their own experience of misfor-

tune, and with their long observation of the ills of life, the world should appear to them a dreary wilderness?

If the former of these views of life be too gay, the latter is certainly too gloomy. The true medium is the aspect under which life is seen at the middle station, in passing from youth to age. By the help of long experience and cool reflection, it is clearly ascertained that this world is neither a paradise of flowers, nor a wilderness of thorns; that though trouble and sorrow are the common lot of mortals, this sad account is, through the bounty of Divine Providence, commonly far overbalanced by enjoyments and gratifications of various kinds, animal, social, and intellectual.

ENFIELD

OCTOBER THE FIFTEENTH.

The Pyramids of Egypt.

THE pyramids of Egypt, those wondrous monuments of the wealth and grandeur of the ancient kings of that country, are allowed to have been built at least 1200 years before the birth of Christ.

The three pyramids that are most taken notice of by travellers, as exceeding all the rest both in bulk and beauty, are situated on a ridge of rocky hills, on the borders of the Lybian desert, about ten miles westward from the village of Geeza, which is supposed to be the spot where the ancient Memphis stood, though there are now not the least traces to be found of the ruins of that great and renowned city.

The largest of these pyramids, which has suffered least by time and weather, is six hundred and ninety-three English feet square at the basis, and its perpendicular height is four hundred and ninety-nine feet; but if the height be taken as the pyramid ascends inclining, it is then six hundred and ninety-three feet; which is exactly equal to the breadth of the base, so that the angles and base make an equilateral triangle. The whole area therefore of the base contains four hundred and eighty-two thousand two hundred and forty-nine square feet, which is something more than eleven acres of ground.

On the outside of this pyramid there is an ascent by steps; the breadth and depth of every step is one entire stone, and several of them are thirty feet in length. The top of the pyramid does not end in a point, as it appears

to those who view it from below, but in a little square consisting of nine stones, besides two that are wanting at the angles. Each side of the platform is about sixteen feet; so that a considerable number of persons may stand upon it, whence there is one of the most beautiful prospects that can be imagined.

On the north side of the large pyramid, sixteen steps from the bottom, there is a narrow passage leading downwards into the body of the structure. Those who have explored this passage, find within, galleries, chambers, and a noble hall built of Thebaic marble, situated in the centre of the pyramid.

In this stately hall stands a tomb, which consists of one entire piece of marble hollowed, without any lid or covering; and on being struck it sounds like a bell. The general opinion is, that it was designed for the tomb of Cheops or Cheninis, king of Egypt, the supposed founder of this pyramid. There is no appearance, however, of any corpse having been laid in it. The figure of this tomb is that of an altar, and the marble smooth and plain, without any sculpture or other ornament. How the tomb was brought into the place where it now stands is difficult to conceive, it being impossible it should have come through the narrow passages that are the entrances to the hall. It is therefore generally supposed the tomb was raised up thither from without, before the room was finished; and the roof closed over it.

FORBIS.

OCTOBER THE SIXTEENTH.

Of Homer.

HOMER, the father of poetry, and the author of the Iliad and the Odyssey, lived about 340 years after the siege of Troy; and is commonly supposed to have been a native of Smyrna.

He is usually represented as blind; and we are told that he employed himself in wandering through the country in the character of an itinerant bard. This, however, must not depreciate in our eyes his wonderful merit, of which his works convey so high an idea; for we there see him carrying to the summit of perfection the art of epic poetry, of which he is accounted the inventor.

The two principal poems of Homer are the Iliad and the Odyssey. The subject of the Iliad is the wrath of

Achilles, which proved so fatal to the Greeks when besieging Troy; that of the Odyssey in the voyages and adventures of Ulysses after the sacking of that city.

The fame of Homer rests on the firmest foundation. His countrymen, who thoroughly understood the characters and manners he described, and the languages in which he wrote, and who are allowed to excel all mankind in the acuteness of their understanding and the exquisite delicacy of their taste, regarded his Iliad and his Odyssey as the most perfect works of human genius.

Great cities contended for the honour of the poet's birth. The venerable Lycurgus collected and transcribed the Iliad and the Odyssey with his own hand; and Solon ordained them to be solemnly recited in the Athenian republic. Alexander the Great was so passionately fond of their perusal, that he placed them every night under his pillow; and the most ingenious of the ancient critics deduced from these poems the justest rules of criticism.

The best epic poets of succeeding times, such as Virgil, Tasso, Milton, and Voltaire, have looked up to Homer as the model for their imitation. They have not only copied him in the arrangement and conduct of their subject, but many passages in their poems are little else than paraphrases from his admirable works.

The best English translation is that by Mr. Pope; and another has appeared, deserving of notice, from the pen of Mr. Cowper.

OCTOBER THE SEVENTEENTH

The Art of Painting.

PAINTING, the art of representing all visible objects by lines and colours, is said to have had its rise among the Egyptians: the Greeks, who learned it of them, carried it to the summit of perfection, if we may believe the stories related of their Apelles and Zeuxis.

The Romans, in the latter times of the Republic, and under the first emperors, were not without considerable masters in the art; but the inundation of barbarians which deluged Italy, proved fatal to the arts, and almost reduced painting to its first elements. Nor was it recovered in Europe till the age of popes Julius II. and Leo X.

This last revolution in the history of painting has given scope for distinguishing it into ancient and modern. Ancient painting comprehends the Greek and Roman

the modern has formed several schools, each of which possesses its peculiar merit and character.

It was in Italy, however, that painting returned to its ancient honour, when Cimabue, born at Florence in the year 1240, betaking himself to the pencil, transferred the poor remains of the art from a Greek painter or two, into his own country. He was seconded by some other Florentines: the first who gained any reputation were Ghirlandaio, Michael Angelo's master; Pietro Perugino, the master of Raphael Urbino; and Andrea Verocchio, the teacher of Leonardo da Vinci.

But these scholars greatly surpassed their masters; they not only eclipsed all that had been done before them, but carried painting to a height of excellence, from which for a long period afterwards it materially declined. It was not by their immortal works alone they advanced the art, but by the number of pupils whom they bred up, and the schools which they formed.

Michael Angelo, born in 1474, founded the school of Florence; Raphael, born in 1483, that of Rome; and Leonardo da Vinci, born in 1445, the school of Milan; to which must be added, the Lombard school, established about the same time, and which became very considerable under Giorgione and Titian; both born in the year 1477.

Beside the Italian masters, there were others of great eminence about the same period on this side the Alps, especially in Flanders and Holland, who had no communication with those of Italy: but in Italy, and particularly at Rome, the art was practised with the greatest success; and, from time to time, the greatest masters were produced.

France has given birth to some eminent painters, as Poussin, Lebrun, David, and others; and our own country has, during the last century, been distinguished by artists, such as Reynolds, Hogarth, West, Barry, Wilson, Morland, Gainsborough, and others.

OCTOBER THE EIGHTEENTH.

Characteristics of the Hindoos.

THE most striking features in the character of the Hindoos are their superstition, and that love of indolence and inaction which causes them proverbially to quote this passage from the writings of one of their authors: 'It is better to sit still than to walk; better to sleep than to wake; but death is best of all.'

In India the dominion of religion extends to a thousand particulars, which in other countries are governed either by civil laws, by taste, or custom. Dress, food, the common intercourse of life, marriages, and professions, are all under the jurisdiction of religion; there is scarcely any thing that is not regulated by superstition, or any thing so trifling and minute as to be held a matter of indifference.

The Hindoos have in all ages believed in the transmigration of souls. They cannot think without horror of depriving any thing of life, and do not less respect that precious gift of God in the flea that bites them, than in the bulky elephant.

Some of their tribes not only forbear to kill any living creature, but erect hospitals for cows, horses, goats, and dogs, that happen to be lame or enfeebled by age; and they will purchase a lame ox of his Mahometan owner, to prevent his being killed by his master. The tribes or casts who adhere to this extreme of benevolence, also once a year prepare an entertainment for the flies, setting before them large dishes of milk and sugar; and at other times they kindly take a bag of rice, and, walking out two or three miles, scatter the rice round the ant-hills.

As the Hindoos wholly abstain from animal food, the simplicity of their lives appears strictly correspondent with that of their diet; for this regimen seems to have an influence on their minds as well as on their bodies, they being generally free from the more violent passions, and from restless pursuits, except what is excited by a too eager avarice. Their constitutions are generally healthy; their senses of smell and taste are exquisite, and far exceed those of Europeans; and the Hindoos are as nice in the taste of different waters, as the Europeans are in that of wines, and make as great a point of luxury in the choice of them.

OCTOBER THE NINETEENTH.

The four learned Ages.

It is a singular phenomenon, and one which has often employed the speculations of curious men, that writers and artists, most distinguished for their parts and genius, have generally appeared in considerable numbers at a time. Some ages have been remarkably barren in them; while at other periods Nature seems to have exerted herself with

more than ordinary effort, and to have poured them forth with a profuse fertility.

Various reasons have been assigned for this. Some of the moral causes are obvious; such as favourable circumstances of government, and of manners; encouragement from great men; and emulation excited among the men of genius.

But as these have been thought inadequate to the whole effect, physical causes have been also assigned; and some writers have collected many observations on the influence which the air, the climate, and other natural objects, may be supposed to have upon genius. But whatever the causes be, the fact is certain, that there have been periods or ages of the world much more distinguished than others, for the extraordinary production of genius.

Learned men have marked out four of these happy ages. The *first* is the Grecian age, which commenced near the time of the Peloponnesian war, and extended till the time of Alexander the Great: within which period we have Herodotus, Thucydides, Xenophon, Socrates, Plato, Aristotle, Demosthenes, Æschines, Lysias, Isocrates, Pindar, Æschylus, Euripides, Sophocles, Aristophanes, Menander, Anacreon, Theocritus, Lysippus, Apelles, Phidias, and Praxiteles.

The *second* is the Roman, or, as it is commonly called, the Augustan age, included nearly within the days of Julius Cæsar and Augustus, affording us Catullus, Lucretius, Terence, Virgil, Horace, Tibullus, Propertius, Ovid, Phædrus, Cæsar, Cicero, Livy, Sallust, Varro, and Vitruvius.

The *third* age is that of the restoration of learning, under the Popes Julius II. and Leo X. when flourished Ariosto, Tasso, Sannazarius, Vida, Machiavel, Guicciardini, Davila, Erasmus, Paul Jovius, Michael Angelo, Raphael, Titian, Aldus, and the Stephani.

The *fourth* comprehends the age of Louis XIV. and queen Anne, when there flourished in France, Corneille, Racine, Moliere, Fontaine, Bossuet, Fenelon, Bourdaloue, Fontanelle, Massillon, Pascal, Bruyere, and Bayle; and in England, Dryden, Pope, Addison, Prior, Swift, Parnel, Arbuthnot, Congreve, Otway, Young, Rowe, Atterbury, Shaftesbury, Bolingbroke, Tillotson, - Temple, Boyle, Locke, Newton, and Clarke.

Other ages of learning will doubtless be characterised by posterity, and we may hope that our own will not be deemed unworthy of such distinction.

BLAIR.

OCTOBER THE TWENTIETH.

Of the Laplanders, and Rein-deer.

AGRICULTURE is but little attended to in Lapland.—The inhabitants are chiefly divided into fishers and mountaineers. The former build their habitations near some lake, from which they draw their subsistence. The others seek their support on the mountains, possessing herds of rein-deer, more or less numerous. They are excellent herdsmen, and rich in comparison with the fishermen.—Some of them possess from five hundred to a thousand rein-deer, which they mark and divide into classes, so that they instantly perceive whether any one is strayed, though they are not able to count so high a number as that to which their flock amounts. Those who have but a small flock give to every individual a proper name.

Besides looking after the rein-deer, the fishery, and the chase, the men employ themselves in the construction of their canoes, sledges, and harness. The business of the women consists in making nets, in drying fish and flesh, in milking the rein-deer, in making cheese, and tanning hides; but the men look after the kitchen, in which the women are seldom allowed to interfere.

The principal articles of commerce among the Laplanders are white, black, and grey fox-skins, grey squirrels, and sables, which they willingly exchange for cloth, tobacco, and spirituous liquors.

The rein-deer have been wisely reduced by the Laplander to a state of domestication and servitude, and in these creatures alone he finds almost all his wants supplied: they feed and clothe him; with their skins he covers his tents, and makes his bed; of their milk he makes cheese, and uses the whey for his drink. Every part of this valuable animal is converted to some use: its sinews to make bow-strings, springs for catching birds, and threads for sewing: its horns the Laplander sells, to be converted into glue; its skin also, and its tongue, which is accounted a great delicacy, are sent to the southern parts of Europe, and procure him toys and luxuries.

The rein-deer carries the Laplander in his journeys; it is yoked to a sledge, made very light, by means of a strap, which goes round its neck, and comes between its legs; the rider guides the animal with a cord, which he fastens round the horns. In general they can go about

thirty miles without halting, and without any great or dangerous efforts.

The food which this faithful domestic lives upon is moss ; and while the fields are clothed with this, the Laplander envies neither the fertility nor verdure of the southern landscape. Wrapt up in his deer-skins, he defies the severity of his native climate ; and in the midst of snows, fearless and at his ease, he drives his herds along the desert, and subsists where another would perish, while his cattle root up their frugal fare from under the snow.

J. GOLDSMITH.

OCTOBER THE TWENTY-FIRST.

Historical Account of the Apostles. (A Sunday Lesson.)

JESUS CHRIST selected twelve out of the number of his disciples, to be invested with the apostleship. Their names were Simon Peter, Andrew, James the Greater, John, Matthew, Philip, Bartholomew, Thomas, James the Less, Jude surnamed Thaddeus, Simon the Canaanite, and Judas Iscariot. Of these, Peter, Andrew, James the Greater, and John, were fishermen ; and Matthew, a receiver of the public revenues : of what profession the rest were, we are not told in Scripture ; though it is probable they were mostly fishermen.

After the apostles had exercised the ministry for twelve years in Palestine, they resolved to disperse themselves in different parts of the world, and agreed to determine by lot what parts each should take. According to this division, St. Peter went into Pontus, Galatia, and the other provinces of the Lesser Asia. St. Andrew had the vast northern countries of Scythia and Sogdiana allotted to his portion. St. John's was partly the same with Peter's, namely, the Lesser Asia. St. Philip had Upper Asia assigned to him, with some parts of Scythia and Colchis. Arabia Felix fell to St. Bartholomew's share. St. Matthew preached in Chaldæa, Persia, and Parthia. St. Thomas preached likewise in Parthia ; as also to the Hyrcanians, Bactrians, and Indians. St. James the Less continued in Jerusalem, of which church he was bishop. St. Simon had for his portion Egypt, Cyrene, Lybia, and Mauritania ; St. Jude, Syria and Mesopotamia ; and St. Matthias, who was chosen in the room of the traitor Judas Iscariot, Cappadocia and Colchis.

Thus, by the dispersion of the apostles, Christianity was very early planted in many parts of the world. We have, however, but a very short and imperfect account of their travels and actions.

St. Paul is frequently called *the apostle* by way of eminence; and also the apostle of the Gentiles, because his ministry was chiefly used for the conversion of the Gentile world; as that of St. Peter was for the Jews, who is therefore styled the apostle of the circumcision.

OCTOBER THE TWENTY-SECOND.

Manufacture of Pins and Needles.

THERE is hardly any commodity cheaper than *Pins*, and but few that pass through more hands before they come to be sold. It is reckoned that twenty-five work-people are successively employed on each pin, between the drawing of the brass wire and the sticking of the pin into the paper.

When the brass wire, of which the pins are to be formed, is first received, it is generally too thick for the purpose of being cut into pins. It is therefore wound off from one wheel to another, with great velocity, and made to pass between the two, through a circle in a piece of iron, of smaller diameter. The wire is then straightened, and afterwards cut into lengths of three or four yards, and then into smaller ones, every length being sufficient to make six pins. Each end of these is ground to a point, which is performed by a boy, who sits with two small grinding-stones before him, turned by a wheel. Taking up a handful he applies the ends to the coarsest of the two stones, being careful at the same time to keep each piece moving round between his fingers, so that the points may not become flat; he then applies them to the other stone: by these means a boy of twelve or fourteen years of age is enabled to point about sixteen thousand pins in an hour. When the wire is thus pointed, a pin is taken off from each end; and this is repeated till it is cut into six pieces.

The next operation is that of forming the heads; or, as it is called, head-spinning; which is done by means of a spinning-wheel, one piece of wire being thus wound round another with astonishing quickness, and the inner one being drawn out leaves a hollow tube: it is then cut with shears, every two turns of the wire forming one head;

and these are softened by being thrown into iron pans, and placed in a furnace till they are red-hot. As soon as they are cool again, they are distributed to children, who sit with anvils and hammers before them, which they work with their feet by means of a lathe : and, taking up one of the lengths, they thrust the blunt end into a quantity of the heads that lie before them ; and catching one at the extremity, they apply it immediately to the anvil and hammer ; and by a motion or two of the foot, the point and the head are fixed together in much less time than it can be described in, and with a dexterity only to be acquired by practice, the spectator being in continual apprehension for the safety of their fingers' ends.

The pin is now finished as to its form, but still it is merely brass, and has yet to be coloured ; for which purpose it is thrown into a copper containing a solution of tin and the lees of wine. Here it remains for some time, and, when taken out, it assumes a white though dull appearance. To give it a polish, it is put into a tub containing a quantity of bran, which is set in motion by turning a shaft that runs through its centre, and thus, by means of friction, it becomes perfectly bright. The pin being complete, nothing remains but to separate it from the bran, which is performed by a mode exactly similar to the winnowing of corn ; the bran flying off, and leaving the pins behind fit for immediate sale.

The first thing in making *Needles* is to pass the steel through a coal fire, and by means of a hammer to bring it into a cylindrical form. After this is done, the steel is drawn through a large hole of a wire-drawing iron, and then returned into the fire, and drawn through a second hole of the iron, smaller than the first ; and so on, till it has acquired the degree of fineness required. The steel, being thus reduced to a fine wire, is cut into pieces, of the length of the needles intended. These pieces are flattened at one end on an anvil, in order to form the head and eye. They are then softened, and pierced at each extreme of the flat part, on the anvil, by a punch of well-tempered steel ; and laid on a leaden block, to bring out, with another punch, the small piece of steel remaining in the eye. When the head and eye are finished, the point is formed with a file, and the whole is filed over. The needles are then laid, to heat red-hot, on a long narrow iron, crooked at one end, in a charcoal fire ; and when taken out again, they are thrown into a basin of cold water to harden. They are next placed in an iron shovel on

a fire more or less brisk in proportion to the thickness of the needles, taking care to move them from time to time. This serves to temper them, and take off their brittleness. They are now to be straightened one after another with a hammer.

The next process is the polishing. To do this, they take twelve or fifteen thousand needles, and range them in small heaps against each other on a piece of new buckram sprinkled with emery-dust. When the needles are thus disposed, emery-dust is thrown over them, which is again sprinkled with oil of olives; and at last the whole is made up into a roll, well bound at both ends. This roll is laid on a polishing table, and over it a thick plank loaded with stones, which men work backward and forward for two whole days, by which means the needles become gradually polished. They are now taken out, and the filth is washed off with hot water and soap. They are then wiped in hot bran, a little moistened, which is placed with the needles in a round box suspended in the air by a cord, which is kept stirring till the bran and needles are dry.

The needles are afterwards sorted; the points turned all one way, and smoothed with an emery-stone turned by a wheel; and this is the end of the process: nothing further remaining to be done, but to make them up in packets of 250 each.

BOOK OF TRADES.

OCTOBER THE TWENTY-THIRD.

On the Migration of Birds.

THE migration of birds (a circumstance common to the quail, the stork, the crane, the fieldfare, the woodcock, the cuckoo, the martin, and swallow, and various others,) is a very curious article in natural history, and furnishes a striking instance of a powerful instinct impressed on animals by the Creator.

The birds of passage are all peculiarly accommodated, by the structure of their parts, for long flights; and it is remarked, that in their migrations they preserve a wonderful order and polity: they fly in troops, and steer their course, without the aid of a compass, to vast and distant regions. Wild geese form themselves into a wedge-like figure; and when the three foremost, who lead the way, become tired, they retreat behind, and are relieved by others, who are again succeeded by the rest in turns.

It has been observed, that the storks, for about the space of a fortnight before they pass from one country to another, constantly resort together from all the surrounding parts of a certain plain; and there arranging themselves once every day into the form of their flight, appear to determine the exact time of their departure, and the places of their future abode.

The manner in which the birds of passage travel to their southern abodes, is supposed to vary according to the structure of their bodies, and their power of supporting themselves in the air. Those with short wings, such as the redstart, blackcap, and others, though they are incapable of such long flights as the swallow, or of flying with such celerity, yet may pass to less distant places, and by slower movements. Swallows and cuckoos may perform their passage in a very short time, but these have no necessity for speed, since every day's journey affords them an increase of warmth, and a continuance of food. *MAVOR.*

OCTOBER THE TWENTY-FOURTH.

The Migration of Fishes.

Of all migrating animals, particular kinds of fishes perform the longest journeys, and in the greatest numbers. — The Salmon, which makes regular migrations, frequents the northern regions alone, and is unknown in the Mediterranean sea, and in all the rivers which fall into it.

In the month of September salmons quit the ocean, and ascend the rivers to deposit their spawn. So strong is the instinct of migrating, that they press up the rivers with amazing keenness, and scarcely any obstacle is sufficient to retard their progress. They spring with great agility over cataracts several feet in height. When they find a place which they think proper for depositing their eggs, the male and female unite their labours in forming a convenient receptacle for the spawn in the sand, generally about eighteen inches deep. After this important office has been performed, they hasten back to the sea. Toward the end of March the young fry begin to appear, and gradually increase in size till they acquire the length of four or five inches, when they are called smelts or smoults.

Herrings likewise migrate. They are chiefly confined to the northern and temperate regions of the globe. They frequent the highest latitudes, and are sometimes found on

the northern coasts of France. They appear in vast shoals on the coast of America, as far south as Carolina. In Chesapeake-bay there is an annual inundation of herrings; and they cover the shores in such amazing numbers as to become offensive to the inhabitants. The great winter rendezvous of the herrings is within or near the arctic circle, where they remain several months.

They begin their migration in large shoals southward in the spring; but in their progress meeting with the Shetland Islands, the shoal divides into two branches; one branch skirts the eastern, and the other the western shores of Great Britain; and they fill every bay and creek with their numbers, affording nourishment to many thousands of the human race.

Besides salmons and herrings there are many fishes which observe a regular migration, as mackrels, lampreys, pilchards, &c. About the middle of July, the pilchards, which are a species of herrings, though smaller, appear in vast shoals off the coasts of Cornwall. When winter approaches, like the herrings they retire to the arctic seas.

MAVOR.

OCTOBER THE TWENTY-FIFTH.

On Sound.

SOUND is the effect of collision of bodies; and of a tremulous motion in consequence of that collision, communicated thence to the circumambient fluid, and propagated through it to the organs of hearing.

Air is a vehicle for sound, but not the only vehicle; for it is found by trial, that sounds are conveyed through water almost with the same facility with which they move in air.

That bodies move or tremble when they produce sound, is evident in drums, bells, and other instruments, whose vibrations, being large and strong, are therefore more perceptible; and it is equally clear, that a similar vibration is excited in the air; because this vibration is communicated through it to other bodies that are adapted to vibrate in the same manner: thus bells, glasses, basins, and musical strings, will sound merely by the action propagated from other sounding bodies.

The common velocity of sound, as ascertained from experiment, is 1142 English feet in a second of time.—The knowledge of the velocity of sound is important for

determining the distances of ships, or other objects: for instance, suppose a ship fires a gun, the sound of which is heard five seconds after the flash is seen: then 1142 multiplied by five gives the distance of 5710 feet, or one mile and 430 feet.

Continuity of sound from the same body is only a deception of the hearing: for, as each distinct sound succeeds at very small intervals, the organ has no time to transmit its images with equal swiftness to the mind, and the interval is thus lost to sense. When a drum is beaten at a small distance, or when children run with their sticks along close rails, a continuing sound is represented, though each stroke is perfectly distinct and insulated.

When the aerial waves meet with an obstacle which is hard, and of a regular surface, they are reflected: and consequently, an ear placed in the course of these reflected waves will perceive a sound similar to the original sound, but which will seem to proceed from a body situated in the same position and distance behind the plane of reflection, as the real sounding body is before it. This reflected sound is called an echo; and is chiefly observable in smooth, tortuous, and hollow places, as in valleys, caves, walls, and old vaulted buildings.

The strength of sound is greatest in cold and dense air, and least in that which is warm and rarefied. Sound, like light, after it has been reflected from various places, may be collected in one point as into a focus; and it will be there more audible than even at the place whence it proceeded. On this principle it is that galleries are constructed, where a low whisper uttered on one side is heard very distinctly at the other.

The position of the ear is admirable; for it is placed in the most convenient part of the body, near the brain, the common seat of all the senses, to give the more speedy information; in a part where it can be best guarded; and in the neighbourhood of its sister sense, the eye, with which it has a peculiar and admirable communication by its nerves.

DERHAM

OCTOBER THE TWENTY-SIXTH.

Of the Hot Spouting Springs of Water in Iceland.

NEAR Langervatan, a small lake about two days' journey distant from Mount Hecla, says a traveller, we beheld

the steam of the hot springs rising in eight different places, one of which continually threw up into the air a column of water from eighteen to twenty-four feet high. The water was extremely hot, so that a piece of mutton and some salmon-trouts were almost boiled to pieces in it in six minutes.

At Geyser not far from Skallholt, one of the episcopal sees in Iceland, within the circumference of three English miles, forty or fifty boiling springs are seen together; and the largest, which is in the middle, particularly engaged our attention the whole of the day that we spent here. The aperture through which the water arose is nineteen feet in diameter; and round the top is a basin nine feet higher than the conduit. Here the water does not spout continually, but only by intervals several times a day; and, as I was informed by the Icelanders, in wet weather higher than at other times.

On the day we were there the water spouted ten different times, between the hours of six and eleven in the morning, each time to the height of fifty or sixty feet. Before, the water had not risen above the margin of the pipe: but now it began by degrees to fill the upper basin, and at last to run over. Our guides told us that the water would soon spout up much higher than it had done.

Soon after four o'clock we observed that the earth began to tremble in three different places; as well as the top of a mountain which was about three hundred fathoms distant from the mouth of the spring. We also frequently heard a subterraneous noise, like the discharge of a cannon: and immediately afterwards a column of water spouted from the opening, which at a great height divided itself into several rays, and according to our observations was ninety-two feet high. Our great surprise at this uncommon force of the air and fire was increased, when many stones, which we had flung into the apertures, were thrown up again with the spouting water. TROIL.

OCTOBER THE TWENTY-SEVENTH.

The Wonders of the Human Voice.

PERHAPS the human voice is the greatest master-piece of the Creator. It is impossible to fathom its admirable mechanism, whether we consider its principle, its organs, or its variations. We will try silently to reflect upon it.

We can utter sounds. What is it that enables us to do so? This faculty seems to depend on the construction of the wind-pipe. When the air we have inhaled is expelled with quickness, the little opening in it occasions a sound. This curious pipe is composed with circular gristles, and these are held together by an elastic membrane. There is a little lid at the entrance which opens to let out the air. The tones of the voice are modified and multiplied by its opening less or more. It closes when we swallow, in order to keep out the food which has to pass over it in its passage to the stomach.

We learn from experience, that there are twelve full tones in the human voice, taken in its fullest extent. It was necessary, that the wind-pipe should be divided into twelve equal parts, in order to produce this variety. Its two sides, when stretched, are distant from each other the tenth part of an inch; for which we may calculate, that each tone of the voice may be subdivided into an hundred other parts; and further, that a man is able to pronounce two thousand four hundred different tones, all of which may be distinguished by the ear. But in regard to these surprising properties, we have few advantages over the animals. In this, however, we surpass them; we can compress the air, and modify the voice so as to pronounce letters and words. The lips, the teeth, and the palate contribute much to this operation.

The five vowels have only a simple sound; let us dwell a little on the manner in which we utter them.

We pronounce *a* quite different to what we do *e*, *i*, *o*, *u*; though we pronounce it with the same tone. But the reason of this difference is one of the impenetrable mysteries of nature. The mouth must be more or less opened to pronounce the five vowels, and for this reason the human mouth is differently formed from that of any other animal. Those birds which learn to imitate man's voice, can never pronounce distinctly the several vowels, and hence the imitation must be imperfect. Three or four organs contribute to the pronunciation of consonants; the lips, the tongue, and the palate. The nose indeed has its share: if you stop it, certain letters cannot be pronounced but in an unintelligible way.

One of the wonders of the voice is, that no human art has ever been able to imitate it by any machine. Song, it is true, may be imitated; but the articulation of sounds, and the pronunciation of different vowels, cannot. There is a stop in some organs, called the *human voice*, but no

tones are produced by it, except such as resemble the diphthongs *ai* or *ae*. All the art of man cannot imitate one of our words, which we produce with so much ease.

STURM.

OCTOBER THE TWENTY-EIGHTH.

Duty of Praise and Thanksgiving. (A Sunday Lesson.)

THE duty of praise and thanksgiving is a debt and law of our nature. We had such faculties bestowed on us by our Creator, as made us capable of satisfying this debt, and obeying this law; and they never, therefore, are employed more naturally than in this occupation. When God had finished that goodly frame of things which we call *the world*, and put together the several parts of it according to his infinite wisdom, there was still wanting a creature in these lower regions, that could apprehend the beauty, order, and exquisite contrivance of it; that from contemplating the gift, might be able to raise itself to the great Giver, and do honour to all His attributes.

Every thing, indeed, that God made, did in some sense glorify its author, inasmuch as it carried upon it the plain mark and impress of the Deity, and was an effect worthy of that First Cause from which it flowed; and thus might the heavens be said, at the first moment in which they stood forth, to "declare his glory, and the firmament to show his handy-work."

But this was an imperfect and defective glory; the sign could be no signification here below, while there was no one to take notice of it. Man therefore was formed to supply this want; endued with powers to find out and to acknowledge these unlimited perfections: and then put into this temple of God, this lower world, as the priest of nature, to offer up the incense of thanks and praise for the mute and insensible part of the creation.

This duty of thanksgiving takes the surer hold of us, by that strong bent towards gratitude which the Author of our nature has implanted in it. There is not a more active principle than this in the mind of man; and surely that which deserves its utmost force is God, the great and universal benefactor, from whom alone we received whatever we either have or are, and to whom we can repay nothing but our praises and thanksgiving; to whom therefore be glory and praise for ever!

ATTERBURY.

OCTOBER THE TWENTY-NINTH.

Ornaments and Accomplishments of Education.

FRENCH is now esteemed an accomplishment to both sexes. There are several good books written in that language which are not unworthy of our perusal; and there are many words now introduced in the English language, borrowed and derived from it, as well as from the Latin and Greek; so that it may not be improper for an English gentleman to learn those languages, that he may understand his own the better. If persons have occasion to converse with foreigners at court, or in the city, or if they design to travel abroad, the French is a necessary tongue, because it is much spoken throughout Europe.

It is still more important that youth should be perfectly skilled in reading, writing, and speaking their native tongue, in a correct, a polite, and a graceful manner. It is of more worth and advantage to gentlemen and ladies to have an exact knowledge of what is decent, just, and elegant in English, than be critics in foreign tongues and dead and useless languages.

Youth of both sexes should be a little acquainted with logic, that they may learn to obtain clear ideas; to banish the prejudices of infancy, custom, and humour; and cast their thoughts and affairs into a proper and easy method.

Several parts of mathematical learning are also necessary ornaments of the mind; and many of these are so agreeable to the fancy, that young persons will find entertainment in acquiring the knowledge of them.

Besides the common skill in accounts which is needful for every trader, there are useful rules and practices in arithmetic to which a gentleman should be no stranger; and if his genius be that way, a little insight into algebra would be no disadvantage to him. It was for want of a more general acquaintance with mathematical learning, that a century ago, a good algebraist and a geometrician were counted conjurers; and people applied to them to seek for lost horses and stolen goods.

They should also know something of geometry, so far at least as to understand the names of the various lines and angles, surfaces and solids, and to know some of the most general properties of angles, triangles, squares, and circles, &c. The world has now grown so learned in mathematical science, that this sort of language is often used in common writing, and in conversation.

Geography and Astronomy are exceedingly delightful studies; and no young person of either sex is now esteemed to have had an elegant education without some knowledge of them. It is absolutely necessary for young persons to learn the several parts of the land and sea, that they may know in what quarter of the world the chief cities and countries are situated; that they may not grossly blunder, and expose themselves to contempt and ridicule. Without the knowledge of geography we cannot study the important science of History with profit, nor even understand the common newspapers.

It is necessary also to know something of the heavenly bodies, and their various motions and periods of revolution, that we may guard against vulgar fears and prejudices, and be able to behold the sun covered with darkness, and the full moon deprived of her light, without foreboding that the government is in danger, or that the world has come to an end.

WATTS.

OCTOBER THE THIRTIETH.

Observations on the Accomplishments of Youth.

NATURAL Philosophy is a very bright ornament of our rational natures: and a course of philosophical experiments should be frequently attended by young ladies as well as gentlemen.

History is another accomplishment of youth, and ornament of education. The narratives of the various occurrences in nations, as well as in the lives of particular persons, will furnish the mind with a store of knowledge, whence to derive useful observations, inferences, and rules of conduct.

Biography ought to be pursued with equal zeal. It is equally interesting, and more applicable to the pursuits of common life. Biography teaches the knowledge of human nature, excites a spirit of emulation, and enables us to surmount the dangers and difficulties which attend our progress through life.

Nor can our education be called completely elegant in so polished an age as this, without something of Poetry. I would not be understood to recommend verse-making to every young gentleman and lady; but reading it in the best authors, to learn to know, and taste, and feel, a fine stanza, as well as hear it. Nor is this a mere amusement,

or useless embroidery of the soul ; it brightens and animates the fancy with a thousand beautiful images ; it enriches the soul with sublime sentiments and refined ideas ; it fills the memory with a noble variety of language, and furnishes the tongue with speech and expression suited to every subject. It assists us in speech and writing, and adds life and beauty to conversation.

Drawing and Painting are ingenious and graceful acquirements. Well-educated youth should have at least some taste of these arts, some capacity of being pleased with a curious draught, a noble painting, a beautiful statue, and other fine resemblances of nature.

Fencing and Riding are accomplishments for gentlemen ; they are exercises of a healthy kind, and may be useful in life.

Dancing is a fashionable accomplishment of both sexes, and contributes to form the body to graceful motions ; but where it is much indulged it has sensible dangers, by leading youth too often and too early into company.

But of all the accomplishments of youth there is none preferable to decent behaviour, a modest freedom of speech, a soft and elegant address, a graceful deportment, a hatred of calumny and slander, a readiness to do good, compassion to the unfortunate, with an air and countenance expressive of all these excellent qualifications. WATTS.

OCTOBER THE THIRTY-FIRST.

Pythagoras.

THE ancients are by no means agreed concerning the birth-place of Pythagoras, but the more common opinion is, that he was a native of the island of Samos. Of his extraction nothing further is known than that his father's name was Mnesarchus, probably a merchant of Tyre or some other maritime city, who trading to Samos, was admitted to the rights of citizenship, and settled his family in that island. As to the tale of Jamblichus, which makes him a descendant of Jupiter, and relates a prediction of his birth and character from the Delphian priest, barely to mention, is to refute it.

In Egypt, Pythagoras was introduced by the recommendation of Polycrates tyrant of Samos, to Amasis king of Egypt, a great patron of learned men, particularly those of Greece, that he might the more easily obtain access to the colleges of priests. He passed twenty-two years in

Egypt; during this time he made himself perfectly master of the three kinds of writing which were in use in Egypt, the epistolary, the hieroglyphical, and the symbolical; and having obtained access to the most learned men in every celebrated college of priests, he became intimately conversant with their ancient records, and gained an accurate acquaintance with their doctrine concerning the origin of things, with their astronomy and geometry, and, in short, with Egyptian learning in its whole extent.

Pythagoras returning from Egypt to his native island, after an absence of more than twenty years, was desirous that his fellow-citizens should reap the benefit of his travels and studies, and for this purpose attempted to institute a school for their instruction in the elements of science; but chose to adopt the Egyptian manner of teaching, and communicate his doctrines under a symbolical form. The Samians were either too indolent or too stupid to profit by his instructions. The number of his followers was so inconsiderable, that he was obliged for the present to relinquish his design. Loth, however, entirely to abandon the project, he determined, if possible, to find other means of engaging the attention of his countrymen. With this idea he repaired to Delos, and after presenting an offering of cakes to Apollo, there received, or pretended to receive, moral dogmas from the priestess, which he afterwards delivered to his disciples under the character of divine precepts. Amongst the places which he visited during his stay in Greece, was Philus, the residence of Leon, king of the Phalasiens. Here he first assumed the appellation of Philosopher.

Thus furnished, not only with fresh stores of learning, but with a kind of authority which was still more likely to procure him respect, he returned to Samos and made a second more successful attempt to institute among his countrymen a school of philosophy. The place which he chose for his purpose was a semicircular building, in which the Samians had been accustomed to meet for public business. Here he chiefly employed himself in delivering, with an air of sacred authority, popular precepts of morality, which might contribute to the general benefit of the people. Besides this, he provided himself with a secret cave, into which he retired with his most intimate friends and professed disciples, and here, not without a wonderful parade of mystery, gave them daily instructions in the more abstruse parts of philosophy.

Had Pythagoras contented himself with issuing forth

oracular precepts of wisdom, and instructing his select disciples in the speculative doctrines of philosophy, it is probable he might have continued his labours, without molestation, to the end of his life. But he discovered, on many occasions, a strong propensity towards political innovations. Not only at Crotona, but at Metapontus, Rhegium, Agrigentum, and many other places, he obtained great influence over the people, and employed them in urging them to the strenuous assertion of their rights against the encroachments of their tyrannical governors.

According to the Chronicon of Eusebius, he died in the 3d year of the 68th Olympiad, after having lived, according to the most probable statement of his birth, to the age of eighty years. After his death, his disciples paid a superstitious respect to his memory. They erected statues in honour of him, converted his house in Crotona into a temple of Ceres, and appealed to him as a divinity, swearing by his name.

ENFIELD.

NOVEMBER THE FIRST.

Phænomena of the Month of November.

THE preceding month was marked by the *change*, and this is distinguished by the *fall*, of the leaf. The whole declining season of the year is often, in common language, named the fall. There is something extremely melancholy in this gradual process, by which the trees are stripped of all their beauty, and left monuments of decay and desolation. The first of poets has deduced from this quick succession of springing and falling leaves an apt comparison of the races of men:

Like leaves on trees the race of man is found,
Now green in youth, now with'ring on the ground.
Another race the following spring supplies;
They fall successive, and successive rise:
So generations in their course decay;
So flourish these, when those are pass'd away.

POPE'S *Homer*.

This loss of verdure, together with the shortened days, the diminishing warmth, and frequent rains, justify the title of *gloomy* to the month of November; and other animals seem to sympathise with man in feeling it as such.

Intervals of clear and pleasant weather, however, frequently occur; and in general, the autumnal months are,

in our island, softer and less variable than the correspondent ones in spring.

In fair weather, the mornings are somewhat frosty; but the hoar-frost, or thin ice, soon vanishes after sun-rise.

The lengthen'd night elaps'd, the morning shines
Serene, in all her dewy beauty bright,
Unfolding fair the last autumnal day.

And now the mounting sun dispels the fog;

The rigid hoar-frost melts before his beam:

And, hung on ev'ry spray, on ev'ry blade

Of grass, the myriad' low-drops twinkle round.

THOMSON.

High winds frequently happen in November, which at once strip the trees of their faded leaves, and reduce them to their winter-state of nakedness.

Flocks of wood-pigeons, or stock-doves, the latest bird of passage in their arrival, visit us in this month.

Salmons now begin to ascend the rivers to spawn. Their force and agility in leaping over cataracts, and other obstacles to their ascent, are very surprising. They are frequently taken in this attempt, by nets or baskets placed directly below the fall, into which they are carried after an unsuccessful leap.

The farmer strives during this month to finish all his ploughing of fallows, and then lays up his utensils, till the ensuing year.

Cattle and horses are taken out of the exhausted pastures, and kept in the house or yard. Hogs are put up to fatten. Sheep are turned into the turnip-field, or, in stormy weather, fed with hay at the rick.

Bees now require to be moved under shelter; and the pigeons in the dove-house to be fed.

AIKIN.

NOVEMBER THE SECOND.

The Invention of the Telescope.

SEVERAL useful inventions have had their rise in the United Provinces of Holland, particularly that of the telescope; by means of which the wonders of the heavens are discovered to us, and astronomy is brought to a degree of perfection which it was impossible the ancients could ever attain without the assistance of such an instrument.

The invention is owing rather to chance than thought;

is said that the children of a spectacle-maker at

Middleburgh in Zealand, playing in their father's shop, happened to hold two glasses between their fingers at some distance from each other, through which the weather-cock on the steeple appeared much larger than ordinary, and as if it were very near them, but inverted. The children spoke of it to their father, who, surprised at the phenomenon, thought of fixing two glasses in brass circles, and placing them so as to be drawn nearer or removed further at pleasure; and by this means he found he could see objects more distinctly.

This happened about the year 1590; but none of the telescopes then made were above eighteen inches long, or proper for astronomical observations, till the celebrated Galileo, astronomer to the grand duke of Tuscany, turned his attention towards their improvement. Having ground two pieces of glass into form, he fitted them to the two ends of an organ-pipe, and made important discoveries in the celestial regions, which he showed to the Venetian nobility on the tower of St. Mark. From the improvements made by this philosopher, the invention is frequently ascribed to him, and the telescope has been denominated Galileo's tube.

Telescopes are of two sorts, refracting and reflecting. A refracting telescope consists of a convex glass in whose focus the image of a distant object is formed, but in an inverted position. This image may be made by a single lens or eye-glass in viewing the heavenly bodies, because it is not material whether they appear erect or inverted; but in viewing terrestrial objects whose image we would have erect, two other lenses are necessary. If instead of a convex eye-glass we use a concave one of the same focal length, it will render the object erect, equally magnified, and more distinct; but this glass admits only a small area or field of sight, and is therefore not fit to be used when we would take in a great compass. It is very useful, however, in viewing the planets and their satellites, Saturn's ring, &c.: and this is properly the Galilean telescope.

The reflecting telescope, a noble and useful instrument, consists partly of specula, or mirrors, instead of lenses, and is the invention of the great Sir Isaac Newton. The indistinctness of vision by refracting telescopes, which he found was owing to the different refrangibility of the rays of light, made him conclude that refraction was too unequal a principle; he therefore substituted the principle of reflection, and made a telescope consisting of mirrors. This instrument has since received some further improve-

ments; so that a reflecting telescope not more than twenty inches long, may be made to magnify an object as much as a refracting one sixteen feet in length.

Dollond, however, observing the manner in which the indistinctness in the refracting telescopes above-mentioned was avoided in the eye itself, contrived a correction of this defect, by imitating, in glasses made from different materials, the effects of the different humours through which the rays of light pass before they reach the bottom of the eye. The eye-glass of these, may, therefore, be deeper or of greater magnifying power, and the effect is even better than in reflectors, particularly for terrestrial objects. These are called achromatic telescopes, and are now deservedly preferred to all others.

NOVEMBER THE THIRD.

The Microscope.

To the invention of the telescope succeeded that of the microscope; an instrument contrived to magnify the smallest objects, so that they may be viewed distinctly. By whom the microscope was first invented, is not certainly known; but it is generally supposed we owe the discovery to the Hollanders.

These instruments are properly distinguished into simple and compound; the former consisting only of one glass, and the latter of several duly combined: some of these do their office by refraction, others by reflection, and others by refraction and reflection conjointly. A single microscope is either a lens or a spherule: but as little glass spheres may be made much smaller than any lens, so the best microscopes, or those which magnify most, are of the spherical kind.

Water microscopes have been contrived, consisting of spherules or lenses of water instead of glass; but these magnify less, and are therefore less esteemed. Hollow glass spheres of the diameter of half a digit, filled with spirit of wine, are frequently used for microscopes, but these magnify still less than the former.

Any telescope may be converted into a microscope by removing the object-glass to a greater distance from the eye-glass: and since the distance of the image is various according to the distance of the object from the focus, and it is magnified the more as its distance from the object-glass is greater, the same telescope may be successively

converted into microscopes which magnify the object in different degrees.

Many ingenious foreigners, as well as our countrymen, have applied themselves to improve the microscope, in order to lay open the secret wonders of Nature. And, indeed, what surprising discoveries may we not expect, in the minute parts of the creation, from an instrument that makes a small grain of sand appear as large as a nut, or a hair of the head above an inch in diameter !

NOVEMBER THE FOURTH.

On Common Honesty.

I HAVE somewhere read, that a man of honour, on hearing honesty attributed to his fashionable friend, expressed some degree of displeasure at the panegyric, and declared, that such a compliment was only fit for his footman. Our first question concerning a gentleman whose character we wish to learn, is seldom, *Is he honest?* but *Is he rich?* *Is he a man of fashion, spirit, ton, or a jolly fellow?*

Now there have been of late, and indeed at all times, many men of fashion totally destitute of moral honesty. They have possessed every personal grace, and every pleasing accomplishment. They could sing, dance, and play on musical instruments. They could converse with the grave and the gay, and adapt all their sentiments to the present company. They had that freedom which is called charming, and which enabled them to push themselves into all companies, and accost men of rank and character by their surnames, and without any respectful addition. All this could not fail to excite the praise of the ladies, and the envy of the gentlemen. But in the end it has been, in several notorious instances, found that these charming men, with the appearance of whatever is good and agreeable, have been the first to overreach in a bargain, exceedingly successful in the profession of swindling, and particularly adroit at a forgery.

So despicable and detestable do the characters of such men appear on detection, that I cannot help thinking honesty is the best ornament, as well as the best policy. It is, indeed, a diamond of the first water; while all the showy, dazzling, unsubstantial qualities which the artful assume for the purposes of deceit, are no more than

414 *On the Sympathy of the Parts of the Human Body.*

French paste, or paltry glass, at once both tawdry, brittle, and vile.

It cannot surely be denied, that the quality which pervades every part of human life, and tends immediately to render it secure, comfortable, and honourable, is itself one of the most honourable which can be possessed by a human creature; and such is that uncelebrated virtue, plain unassuming moral honesty. Without it, society is a den of thieves, and men are to each other wolves and foxes.

Every day's experience evinces the justness of that representation in the Scriptures, in which it is said, that the heart is deceitful above all things, who can know it? In the most trifling intercourse, where neither pleasure nor profit are in view, the propensity to deceit appears in the little promises, professions, compliments which are mutually made, usually without any sincerity of regard, and often with real and inveterate aversion. But where interest is in view, the machination made use of for the accomplishment of mean and mercenary purposes are often such as might characterise an infernal agent. Plausibility is, at the same time, worn as a cloak; and he who has a design on your purse, your life, or your country, will assume all the appearance of cordial friendship and unpolled honour. It is well known, that the graces, the agreeable qualities, as they are called, and the appearance of the most amiable virtues, have been possessed in perfection by men who finished their lives with ignominy as victims of the law.

Indeed this common honesty, as it is named, is far less common than our pride is willing to suppose; but if it could be introduced into all the employments of life, the golden age would be restored.

Early and late, by night and by day, in season and out of season, as the Scripture strongly expresses it, I would inculcate in the breast of boys the just remark of the moral poet, that an honest man is the noblest work of God.

KNOX.

NOVEMBER THE FIFTH.

On the Sympathy of the Parts of the Human Body.

THE mutual accord, consent, and sympathy of the parts of the human structure, is made by the commerce of the nerves, by their artificial positions, and curious ramifications through the whole body.

From hence it is that a tasteful thing seen or smelt excites the appetite, and affects the glands and parts of the mouth; that a thing seen or heard, that is shameful, affects the cheek with blushes; but, on the contrary, if it pleases and enlivens the fancy, it affects the muscles of the mouth and face with laughter. A thing causing sadness and melancholy demonstrates itself by the glands of the eyes emitting tears. Hence also that sour look produced by anger and hatred, and that gay and pleasing countenance accompanying love and hope.

In short, it is by means of this communication of the nerves that whatever affects the soul is demonstrated by a consentaneous disposition of the *præcordia* within, and a suitable configuration of the muscles and parts of the face without.

As a face is given to man, and to man alone of all creatures, so it is the index of sorrow and cheerfulness, of compassion and severity. In its summit is the brow, and therein is a part of the mind also. Therewith we deny, therewith we consent. With this it is we show our pride, which hath its source in another place, but here its seat;—in the heart it hath its birth, but here it abides and dwells.

The great variety existing throughout the world of men's faces and voices, is an admirable proof of the wisdom of the Creator of all things. Had men's faces been cast in the same, or not a very different mould, their organs of speech would have sounded nearly the same, and the same exact structure of muscles and nerves would have given the hand the same direction in writing. In this case, what confusion, what disturbance, what mischiefs, would the world eternally have lain under! No security could have been to our persons; no certainty, no enjoyment, of our possessions; no distinction between good and bad, between friends and foes; but all would have been exposed to malice, fraud, and violence.

But now, as it is ordered, every man's face can distinguish him in the light, and his voice in the dark; his hand-writing can speak for him though absent, and be his witness, and secure his contracts in future generations: a manifest as well as admirable indication of the Divine superintendence and management.

DERHAM.

NOVEMBER THE SIXTH.

On the Natural History of the Bee.

THE lab'ring bee, by wise instruction, knows
 When op'ning flow'rs their balmy sweets disclose.
 The rising sun her daily task renews:
 Wide, o'er the plains, she sips the pearly dew.
 From mead to mead she wanders through the skies,
 And yellow thyme distends her loaded thighs.
 Each rifled flower rewards her painful toil,
 And her full hive receives the golden spoil:
 On flagging wings each load she thither bears,
 And while the summer smiles, for winter's want prepares.

On examining the structure of the common working bee, the first remarkable part is the trunk, which serves to extract the honey from flowers. It is not formed like that of other flies, in the manner of a tube, by which the fluid is to be sucked up; but like a besom to sweep, or a tongue to lick it away. The animal is furnished also with teeth, which serve it in making wax, which is also gathered from flowers, like honey. In the thighs of the hind legs there are two cavities; and into these, as into a basket, the animal sticks its pellets. Thus employed, the bee flies from flower to flower, increasing its store, and adding to its stock of wax, until the ball upon each thigh becomes as big as a grain of pepper; by this time, having got a sufficient load, it returns, making the best of its way to the hive.

The belly of the bee is divided into six rings, which sometimes shorten the body by slipping one over the other. It contains within it, besides the intestines, the honey-bag, the venom-bag, and the sting. The honey-bag is as transparent as crystal, containing the honey that the bee has brushed from the flowers; of which the greater part is carried to the hive, and poured into the cells of the honey-comb; while the remainder serves for the bee's own nourishment; for during summer, it never touches what has been laid up for the winter.

The sting, which serves to defend this little animal from its enemies, is composed of three parts; the sheath, and two darts, which are extremely small and penetrating. Both the darts have several small points or barbs, like those of a fish-hook, which render the sting more painful, and make the dart rankle in the wound.

Still, however, this instrument would be very slight, did not the bee poison the wound. The sheath, which has a sharp point, makes the first impression, which is followed by that of the darts, and then the venomous liquor is poured in. The sheath sometimes sticks so fast in the wound, that the animal is obliged to leave it behind; by which the bee soon after dies, and the wound is considerably inflamed. To superficial observers, it might at first appear well for mankind if the bee were without its sting; but, upon recollection, it will be found that the little animal would then have too many rivals in sharing its labours. A hundred other lazy animals, fond of honey, and hating labour, would intrude upon the sweets of the hive, and the sweet treasure would be carried off for want of armed guardians to protect it.

The bee is furnished with a stomach for its wax as well as its honey. In the former the powder it collects from flowers is altered, digested, and concocted into real wax, and is thus ejected by the same passage by which it was swallowed. Every comb newly made is white: but it becomes yellow as it grows old, and almost black when kept too long in the hive. Besides the wax thus digested, there is a large portion of the powder kneaded up for food in every hive, and kept in separate cells for winter provision. This is called by the country people *bee-bread*, and contributes to the health and strength of the animal during winter.

BUFFON.

NOVEMBER THE SEVENTH

The Labours of the Bee.

THE bee is an animal not only subject to laws, but active, vigilant, laborious, and disinterested. All its provisions are laid up for the community; and all its arts in building a cell, designed for the benefit of posterity. The substance with which bees build their cells is wax, which is fashioned into convenient apartments for themselves and their young.

When they begin to work in their hives, they divide themselves into four companies; one of which roves the fields in search of materials; another employs itself in laying out the bottom and partitions of their cells: a third is employed in making the inside smooth from the corners and angles; and the fourth company bring food

for the rest, or relieve those who return with their respective burdens.

The bees often change the tasks assigned them; those that have been at work being permitted to go abroad, and those that have been in the fields already taking their places. They seem even to have signs by which they understand each other; for when any of them wants food, it bends down its trunk to the bee from which it is expected, which then opens its honey-bag, and lets some drops fall into the other's mouth. Their diligence and labours are so great, that, in a day's time, they are able to make cells, which lie upon each other, numerous enough to contain three thousand bees.

The cells of bees are perfect hexagons, and formed in the exactest proportion: these in every honeycomb are double, opening on either side, and closed at the bottom. The bottoms are composed of little triangular panes, which, when united together, terminate in a point, and lie exactly upon the extremities of other panes of the same shape in opposite cells. These lodgings have spaces, like streets, between them, large enough to give the bees free passage in and out; and yet narrow enough to preserve the necessary heat. The mouth of every cell is defended by a border, which makes the door a little less than the inside of the cell, and serves to strengthen the whole.

If examined through a glass hive, from the hurry the swarm is in, the whole at first appears like anarchy and confusion: but the spectator soon finds every animal diligently employed, and following one pursuit with a settled purpose. Their teeth are the instruments by which they model and fashion their various buildings, and give them such symmetry and perfection. They begin at the top of the hive, and several of them work at a time at the cells, which have two faces. If they are stinted with regard to time, they give the new cells but half the depth which they ought to have, leaving them imperfect till they have sketched out the number of cells necessary for the present occasion.

The construction of their combs costs them a great deal of labour; they are made by insensible additions, and not cast at once in a mould. There seems no end of their shaping, finishing, and turning them neatly up. The cells for their young are most carefully formed; those designed for lodging the drones are larger than the rest; and that for the queen bee the largest of all.

BUFFON

NOVEMBER THE EIGHTH.

Functions and Growth of the Leaves of Plants.

ONE of the grand functions for which the leaves of trees and plants are designed is, that they throw off by transpiration what is unnecessary to the growth of the plant; and this corresponds to the discharge which is made by perspiration in animal bodies. Indeed plants receive and transpire much more in equal time than large animals. The sunflower, for instance, has been found by repeated experiments to receive and perspire, in twenty-four hours, seventeen times more than a man.

Air evidently passes in at the leaves, and goes through the whole plant, and out again at the roots. If the leaves have no air, the whole plant will die. Plants not only draw through their leaves some part of their nourishment from the air, but the leaves also perform the necessary work of altering the water received in at the roots into the nature and juices of the plant; and hence it is that the life of plants depends so immediately on their leaves.

Leaves being thus necessary, Nature has in all perennial plants provided a reversionary stock of them. Their leaves are always formed in autumn, though they are not unfolded till the following spring. They then open and increase gradually, in proportion to the motion of the sap, and the quantity of nourishment it then receives to be circulated. The leaves of evergreens have also a thin compact skin or cover over their surfaces. They are found by experiment to imbibe and perspire but little in the same space of time when compared with the deciduous trees and shrubs; and it is chiefly owing to this close covering, and to the small proportion of moisture contained in their vessels, that they retain their verdure and continue uninjured in the severest frosts; a circumstance which is likewise owing to their oily exterior. Besides these autumnal leaves, there is another set of them formed in spring, and expanded about midsummer.

One of the most obvious reasons of the fall of leaves is the coldness of the season; for no sooner are they covered with the first hoar-frost, than they are observed to fall in great abundance, and all the trees and plants are stripped of their verdant honours. The cold causes a stagnation of the sap in plants, and prevents its transpiration by the leaves. But there are other causes not to be so familiarly

explained ; for the leaves will certainly fall though it should not freeze during the whole winter ; nor can the shelter of green-houses prevent this annual decay.

NOVEMBER THE NINTH.

The Strawberry Plant.

ONE day, in summer, while busied in the arrangement of some observations which I had made respecting the harmonies discoverable in this globe of ours, I perceived, on a strawberry plant, accidentally placed in my window, some small winged insects, so very beautiful that I took a fancy to describe them. Next day a different sort appeared, which I proceeded likewise to describe. In the course of three weeks, no less than thirty-seven species, totally distinct, had visited my strawberry plant: at length they came in such crowds, and presented such variety, that I was constrained to relinquish the amusement for want of leisure, and, to say the truth, for want of expression.

Yet, my strawberry plant was not in its natural situation, in the open country, on the border of a wood, or by the brink of a rivulet, where it could have been frequented by many other species of living creatures. It was confined to an earthen pot, amidst the smoke of Paris, and I observed it only at vacant moments. I knew nothing of the insects which visited it during the course of the day ; still less of those which might come only in the night, attracted by simple emanations, or, perhaps, by a phosphoric light, which escapes our senses. I was totally ignorant of the various species which might frequent it at other seasons of the year, and of the other endless relations which it might have with reptiles, with amphibious animals, fishes, birds, quadrupeds, and, above all, with man, who undervalues every thing which he cannot convert to his own use.

On examining the leaves of this vegetable, with the aid of a lens which had but a small magnifying power, I found them divided into compartments, hedged round with bristles, separated by canals, and strewed with glands. These compartments appeared similar to large verdant enclosures, their bristles to vegetables of a particular order ; of which some were upright, some inclined, some forked, some hollowed into tubes, from the extremity of which a fluid distilled ; and their canals, as well as their glands, seemed full of a brilliant liquor. In plants of a different species, these

bristles, and these canals, exhibit forms, colours, and fluids, entirely different. There are even glands, which resemble basins, round, square, or radiated.

It is credible, then, from analogy, that there are animals feeding on the leaves of plants, like the cattle in our meadows, and on our mountains; which repose under the shade of a down imperceptible to the naked eye, and which, from goblets formed like so many suns, quaff nectar of the colour of gold and silver. Each part of the flower must present to them a spectacle of which we can form no idea. The yellow *antheræ* of flowers, suspended by fillets of white, exhibit to their eyes, double rafters of gold in equilibrio, on pillars fairer than ivory; the *corolla*, an arch of unbounded magnitude, embellished with the ruby and the topaz; rivers of nectar and honey; the other parts of the floweret, cups, urns, pavilions, domes, which the human architect and goldsmith have not yet learned to imitate.

I do not speak thus from conjecture: for having examined, one day, by the microscope, the flowers of thyme, I distinguished in them, with equal surprise and delight, superb flagons, with a long neck, of a substance resembling amethyst, from the gullets of which seemed to flow ingots of liquid gold. I have never made observation of the *corolla* simply, of the smallest flower, without finding it composed of an admirable substance, half transparent, studded with brilliants, and shining in the most lively colours.

The beings which live under a reflex thus enriched, must have ideas, very different from ours, of light, and of the other phenomena of Nature. A drop of dew, filtering in the capillary and transparent tubes of a plant, presents to them thousands of cascades; the same drop, fixed as a wave on the extremity of one of its prickles, an ocean without a shore; evaporated into air, a vast aerial sea. In these ephemeral beings, we must find the youth of a single morning, and the decrepitude of one day. If they possess historical monuments, they must have their months, years, ages, epochs, proportioned to the duration of a flower. Thus, in proportion as man brings the elements of Nature near him, the principles of his science disappear.

ST. PIERRE

NOVEMBER THE TENTH.

Modes of Salutation among various Nations.

MODES of salutation among various nations have very different characters, and it is no uninteresting speculation to examine their shades. Many display a refinement of delicacy ; while others are remarkable for their simplicity, or for their sensibility.

In general, however, they are frequently the same in the infancy of nations : and in more polished societies, respect, humility, fear, and esteem, are expressed much in a similar manner, for these are the natural consequences of the organization of the body.

The first nations had no peculiar modes of salutation ; they knew no reverences ; they despised and disdained them. The Greenlanders laugh when they see an European uncover his head, and bend his body, before him whom he calls his superior.

The islanders near the Philippines take the hand or foot of him they salute, and with it gently rub their face. The Laplanders apply their nose strongly against that of the person they salute.

Other salutations are very inconvenient and painful. It requires great practice to enable a man to be polite in an island situated in the straits of Sunda : they raise the left foot of the person they mean to compliment, which they pass gently over the right leg, and thence over his face. The inhabitants of the Philippines bend their body very low, placing their hands on their cheeks, and raising at the same time one foot in the air with their knee bent.

An Ethiopian takes the robe of another and ties it about his own waist, so that he leaves his friend half naked.

The grandees of Spain claim the right of appearing covered before the king, to show that they are not so much subjected to him as the rest of the nation. And it is remarked that the English do not uncover their heads so much as the other nations of Europe.

The negroes are lovers of ludicrous actions, and make all their ceremonies farcical. Their mode of expressing respect consists of the most ridiculous contortions. When two negro monarchs visit, they salute each other by snapping the middle finger three times.

NOVEMBER THE ELEVENTH.

Abuses of True Christianity.

How perfective of human nature and human happiness, is that system which, even in the face of an enemy, observes a brother; which is one continued line of exhortation to unbounded benevolence, and whose illustrious founder has declared, that its professors should be known and immortalised by that one sentiment alone; thus pointing out the means of beginning our heaven on earth, and antedating here below the joys and tranquillity of the blessed!

And yet it is horrible to reflect, that instead of answering that happy end, it has, by a strange and unnatural perversion of things, become itself, from the day on which Constantine ascended the throne of the Cæsars, to that in which we live and breathe, the very source of implacable jars, and led to scenes at which every nerve of humanity trembles; and this merely to vindicate and do honour (an imagination which the devil alone could suggest) to particular tenets of faith! Yes! Christians retaliating on each other by turns, every human calamity, pillaging towns, depopulating happy and fertile countries, massacring, with unsparing rage, even the helpless infant, and the tender sex, without any motive, without any spur, but miserable and furious attachment to speculations undeterminable without a new revelation from heaven, and yet which each were blind enough to conceive as essential constituents of Christianity.

I know nothing essential to the belief of a Christian but this, — belief in the being, attributes, government, trinity, and unity, of God; that he is the author of all nature, and fountain of all our blessings; that his providence is universal as the light; that we are responsible creatures, destined for a state of felicity or misery everlasting; that righteousness of course is indispensable to our salvation; that the Holy Spirit assists our infirmity; that Jesus Christ is our redeemer, mediator, advocate, and judge; and that, under the title of his infinite merits, we are all pursuing the same destination and felicity.

Every other point is comparatively frivolous and indifferent, and whichever we embrace or reject, according to the result of our enquiry and judgment, can neither add to nor diminish our right to the name of a Christian, or any way affect our pretensions to the favour of God. And,

what good has ever arisen from annexing imaginary importance to any thing in which all Christians are not agreed? We are sure of the bloody and proscribing spirit which such a libel on right reason and true religion has engendered, sure of the horrid and unparalleled evils it has produced! But where are the benefits? Has it cast one feather into the scale of human virtue or human happiness? Has it been found that any one denomination of Christians has universally carried the palm of uprightness and pure morality? Is it not clear that there are, and ever have been, examples of eminent worth and eminent depravity in all?

Perish then the principle that opposes the natural tendency of man to man, and has deluged the old and the new world with crimes and calamities. I draw a veil over our own experience; it is, alas, too easy at this day, even with the most benevolent intention of healing and doing good, to incur the charge of the very principle I have now deplored and condemned. For myself I will say, for you my hearers, for the truly enlightened of every sect, that I trust there lives not one spark of it in any corner of our souls; and that there is not any human creature in the wide lap of earth, in whose face we should not read the clearest title to our best love and service.

Still never, I do not hesitate to assert it, did the day exist, when, for the honour of a divine religion, and the welfare of human creatures, it was more necessary to unite in tearing up the old and baneful root of bitterness, and impressing deeply on the minds of the ignorant, the great command of love, peace, and union, between all Christians and all men.

Happy had it been for this small but charming portion of the earth, had care been early taken, to direct the attention of a naturally open, generous, and warm-hearted race, as the people of this country have been justly and emphatically called, not to the miserable jealousy of matters that are the discovery of man, but to the great social duties of that system which is the revelation of God.

A good and benevolent life is the sum and substance of it; and the only right preparation we can make for an happy entrance into that blessed region, where sin and sorrow, strife and discord, shall never enter. And much more useful and glorious would I deem it to utter even one clumsy sentence in support of that vital object, than be the author of all the musty folios the groaning shelves of polemic divinity ever bore.

“ A new command I give unto you, that you love one another.”

I have endeavoured to show the influence this divine precept ought to have in conciliating Christians of every religious communion. It remains to consider it as the most powerful incentive to mercy. To commiserate and relieve the miserable is the law of reason and nature, as well as the result of divine and benevolent doctrine. Man, formed to the resemblance of the Deity, was originally placed on this earth to enjoy and divide its benefits with equal wants and equal rights to the same resources. •

The universe was a vast temple, in which the great Author of nature struck the eyes of his creatures under the symbols of various beneficence. A sense of gratitude erected altars, but the blood of animals stained them not; the offering was more noble, that of virtuous and acknowledging hearts.

But this happy state was soon overturned by the violence of human passions. It was incompatible with that growing propensity to injustice, that followed the disorder of our nature; the wants of imagination gave rise to immensity of desires. Force, goaded and instructed by selfishness, produced the crime of usurpation; the feeble were oppressed, and a large portion of mankind handed over to the care of a just and merciful Providence. Here have we, my brethren, if I may use the expression, the ancestry of human misery, and the foundation of that principle which the world knows by the name of Humanity; a principle resting on the eternal law of reason and justice.

KIRWAN.

NOVEMBER THE TWELFTH.

The Molchill, a Lesson for Pride.

IF there be any thing which makes human nature appear ridiculous to beings of superior faculties, it must be pride. They know so well the vanity of those imaginary perfections that swell the heart of man, and of those little supernumerary advantages, whether in birth, fortune, or title, which one man enjoys above another, that it must certainly very much astonish, if it does not very much divert them, when they see a mortal puffed up, and valuing himself above his neighbours, on any of these accounts, at the same time that he is obnoxious to all the common calamities of the species.

To set this in its true light, we will fancy, if you please, that yonder molehill is inhabited by reasonable creatures, and that every pismire (his shape and way of life only excepted) is endowed with human passions. How should we smile to hear one give us an account of the pedigrees, distinctions, and titles, that reign among them!

Observe how the whole swarm divide and make way for the pismire that passes through them! You must understand he is an emmet of quality, and has better blood in his veins than any pismire in the molehill. Don't you see how sensible he is of it, how slow he marches forward, how the whole rabble of ants keep their distances?

Here you may observe one placed upon a little eminence, and looking down on a long row of labourers. He is the richest insect on this side the hillock, he has a walk of half a yard in length, and a quarter of an inch in breadth, he keeps a hundred menial servants, and has at least fifty barley-corns in his granary. He is now chiding and beslaving the emmet that stands before him, and who, for all that we can discover, is as good an emmet as himself.

But here comes an insect of figure! Don't you take notice of a little white straw that he carries in his mouth? That straw, you must understand, he would not part with for the longest tract about the molehill. Did you but know what he has undergone to purchase it! See how the ants of all qualities and conditions swarm about him. Should this straw drop out of his mouth, you would see all this numerous circle of attendants follow the next that take it up, and leave the discarded-insect, or run over his back to come to his successor.

If now you have a mind to see all the ladies of the molehill, observe first the pismire that listens to the emmet on her left hand, at the same time that she seems to turn away her head from him. He tells this poor insect that she is a goddess, and that her eyes are brighter than the sun, that life and death are at her disposal. She believes him, and gives herself a thousand little airs upon it.

Mark the vanity of the pismire on your left hand. She can scarce crawl with age; but you must know she values herself upon her birth; and, if you mind, spurns at every one that comes within her reach. The little nimble coquette that is running along by the side of her, is a wit. She has broke many a pismire's heart. Do but observe what a drove of lovers are running after her.

We will here finish this imaginary scene ; but first of all, to draw the parallel closer, will suppose, if you please, that death comes down upon the molehill in the shape of a cock-sparrow, who picks up without distinction the pismire of quality and his flatterers, the pismire of substance and his day labourers, the white straw officer and his sycophants, with all the goddesses, wits, and beauties of the molehill.

May we not imagine, that beings of superior natures and perfections regard all the instances of pride and vanity among our own species, in the same kind of view, when they take a survey of those who inhabit the earth ; or, in the language of an ingenious French poet, of those pismires that people this heap of dirt, which human vanity has divided into climates and regions.

NOVEMBER THE THIRTEENTH.

Properties and Uses of Cork.

CORK is a body remarkably light, is easily compressed, expands again by its elasticity as soon as the compressing power is removed, and therefore fills or steps up very closely that space into which it has been driven by force. It may be easily cut into all forms; and though it abounds with pores, which are the cause of its lightness, it suffers neither water, beer, nor any common liquid to escape through it ; and it is only very slowly, and after a considerable length of time, that it can be penetrated even by spirits. Its numerous pores seem to be too small to afford a passage to the finest particles of water and wine which can with greater facility ooze through more compact wood, that has larger or wider pores.

Cork is the exterior bark of a tree belonging to the genus of the oak, which grows wild in the southern parts of Europe, particularly France, Spain, Portugal, and Tuscany. When the tree is about fifteen years old, it is fit to be barked, and this can be done successively for eight years. The bark always grows up again, and its quality improves as the age of the tree increases. It is commonly singed a little over a strong fire or glowing coals, or laid to soak a certain time in water ; after which it is placed under stones in order to be pressed straight. We procure the greater part of our Cork from Portugal and Spain.

The practice of employing cork for making jackets to assist one in swimming is very old; for we are informed that the Roman whom Camillus sent to the Capitol when besieged by the Gauls, put on a light dress, and took cork with him under it, because, to avoid being taken by the enemy, it was necessary that he should swim through the Tiber. When he arrived at the river, he bound his clothes upon his head, and, placing the cork under him, was so fortunate as to succeed in his attempt.

The most extensive and principal use of cork at present is for stoppers to bottles. This was not entirely unknown to the Romans; for Pliny says expressly, that it served to stop vessels of every kind; and instances of its being employed for that purpose may be seen in Cato and Horace. Its application to this use, however, seems not to have been very common, else cork-stoppers would have been oftener mentioned by the authors who have written on agriculture and cookery, and also in the works of the ancient poets.

NOVEMBER THE FOURTEENTH.

The Web of the Spider.

WHEN a house-spider purposes to begin a web, it first makes choice of some commodious spot where there is an appearance of plunder and security. The animal then emits one little drop of a glutinous liquor, which is very tenacious, and then creeping up the wall, and joining its thread as it proceeds, it darts itself in a surprising manner to the opposite place, where the other end of the web is to be fastened. The first thread being thus formed, drawn tight, and fixed at each end, the spider then runs upon it backward and forward, still assiduously employed in doubling and strengthening it, as upon its force depends the stability of the whole. The scaffolding being thus completed, the spider makes a number of threads parallel to the first in the same manner, and then crosses them with others, the clammy substance of which they are formed serving to bind them together.

The insect after this operation doubles and trebles the thread that borders its web, so as to prevent the wind from blowing the work away. The edges being thus fortified, the retreat is next to be attended to; and is thus formed like a funnel, at the bottom of the web, where the little

creature lies concealed. To this are two passages, or outlets, one above and the other below; very artfully contrived to give it an opportunity of making excursions at proper seasons, of prying into every corner, and cleaning those parts which are observed to be clogged or incumbered.

If the outworks of the fortification be touched from without, the spider instantly prepares for attack or self-defence. If the insect touching be a fly, he springs forward with great agility; if, on the contrary, the assault comes from an enemy stronger than himself, he keeps within his fortress, and never ventures out till the danger be over.

It often happens that the wind, or the approach of some large animal, destroys in a minute the whole labour. In this case the spider is obliged to remain a patient spectator of the ruin; and, when the danger is past, sets about repairing the calamity. In general, the animal is fonder of mending than making; as it is furnished originally with but a certain quantity of glutinous matter, which when exhausted nothing can renew.

The time seldom fails to come when their reservoirs are entirely dried up, and the poor animals are left to all the chances of irretrievable necessity. An old spider is thus frequently reduced to the greatest extremity; its web is destroyed, and it wants the materials to make a new one. But as it has been long accustomed to a life of shifting, it hunts about to find out the web of another spider, younger and weaker than itself, with whom it ventures a battle. The invader generally succeeds; the young one is driven out to make a new web, and the old one remains in quiet possession. If, however, the spider is unable to dispossess any other of its web, it then endeavours for a while to subsist upon accidental depredation; but in two or three months it inevitably dies of hunger. BUFFON.

NOVEMBER THE FIFTEENTH.

On Vision.

SIGHT is the most perfect and delightful of all our senses. It fills the mind with the greatest variety of ideas, converses with objects at the greatest distance, and continues the longest in action without being satiated with its proper enjoyments.

The sense of feeling can indeed give us a notion of extension, shape, and all other ideas that enter at the eye, except colours ; but yet, it is much straitened and confined in its operation, to the number, bulk, and distance of its particular objects. Our sight seems designed to supply all these defects ; and may be considered as a more delicate and diffusive kind of touch, that spreads itself over an infinite multitude of bodies, comprehends the largest figures, and brings into our reach some of the most remote parts of the universe.

All modern philosophers agree that vision is performed by rays of light reflected from the several points of objects, received in at the pupil of the eye, refracted and collected in their passage through the coats and humours to the retina ; and thus striking, or making on so many points of it an impression, which is conveyed to the brain by the correspondent capillaments or fibres of the optic nerve.

The cornea, or second coat of the eye, being of a convex figure, performs the office of a glass lens. To illustrate this by a familiar example, put a glass lens into a hole made in the window-shutter of a darkened room ; present a pasteboard to this lens, and you will immediately have a picture, in which all the objects without, whether still or in action, will be painted with the greatest precision, and according to all the rules of the most exact perspective.

The humours of the eye act in the same way as the lens of the camera obscura ; the retina serves as the pasteboard. The black skin which hangs within the pupil performs the office of a shutter that excludes the light : it extinguishes the rays whose reflection would render the image less distinct. The pupil, by contracting or dilating itself in proportion to the strength of the light, moderates the action of the rays on the retina ; and the nerve placed behind this communicates to the brain, as before observed, the various concussions it receives, and to which various perceptions correspond.

Objects of the greatest magnitude are delineated on the eye with extreme minuteness, in a space hardly three times larger than the head of a pin ; yet we behold every thing in its proper size. So many millions of rays enter by a small aperture, yet are united in the retina at the bottom of the eye without confusion. Let us ascend a rock, and contemplate the sea ; what millions of waves we discover ! yet each of these waves reflect a mass of light upon our

eye, which is so minute. In an extensive country prospect, every tree, and even every blade of grass, emits its rays, without which it would be impossible for us to perceive the uninterrupted verdure of all the fields beneath us.

ADDISON.

NOVEMBER THE SIXTEENTH.

Theory of the Universe.

THE universe consists of extension of matter under various expansive, gaseous, fluid, and fixed forms of body, proceeding in relative density from the rarest and most extended fluid media, to the most condensed aggregates of fixed atoms.

Body is susceptible of two varieties of motion: 1. a motion or impulse of an aggregate, which occasions it to change its place in regard to other aggregates; and 2. a motion of the atoms of an aggregate, created when any impulse from any cause cannot produce commensurate change of place in the aggregate and diffuse the motion, so that, by re-action, the impulse terminates within the body in the mutual actions of its component atoms.

Motion of both kinds continues to affect a body, until it has been imparted or transferred to aggregates in contact, or has been diffused or radiated through the medium in which it is immersed; and this law of the equalization of motion, by the contact of moving aggregates and atoms with others susceptible of receiving and diffusing the motion, is the proximate cause of all varieties of material phenomena.

Motion appears, therefore, to constitute the life, power, and energy of matter; and is the active soul of the universe. Matter is its patient, and the relative phenomena of bodies are the results. As it acts on aggregates by contact, or by impulse, on and through media, it constitutes the object of physical philosophy; and, as it affects compounds or structures of atoms, it is the object of chemical philosophy.

As no accident of matter can create motion, so all motion may be traced to some previously existing motion, which has been transferred by mechanical combination; and, as existing motions are necessarily transferred and diffused, so no motion is lost; though, by its equal diffusion, it may cease to exhibit sensible phenomena.

The facility of receiving motion being equal to the facility of diffusing it, and motion in bodies constituting their power, all action and re-action are necessarily equal; and motions being inversely as the number of atoms, all bodies act, therefore, on other bodies, at such distances as to produce equal momenta in the agent and patient: consequently, if free to move, or uninfluenced by paramount motions, their reciprocal actions and re-actions oblige them to revolve round a fulcrum or centre of the masses, necessarily producing equal momenta by forces of impulse, which, diverging through a sphere, are in divers bodies to each other inversely as the squares of their distances.

The general motions of the earth, as an aggregate, are the sources of all the relative motions which take place upon it; and every motion on the earth is but an appropriation, re-action, or mechanical transfer of part of the motions of the earth. If the earth were at rest, there could be no motion to transfer; consequently, there could be neither action nor re-action, nor any kind of animal power or loco-motion, nor any aggregate motion or projectile force.

All the parts of the earth consolidate and fall towards the centre, because every part is the patient of the rotatory force, which gives them station proportioned to their rarity; and of the paramount orbicular force which impels all the densest masses towards the line of motion; and also because the centre of the earth is the centre of the combined forces or motions of all the united masses.

All the changes visible on the surface of the earth are consequences of volcanoes, terrene or submarine; or of the slow mechanical action of air and water; and the great changes caused by water arise from the successive transfers of the ocean into either hemisphere, by the revolution of the perihelion point of the earth's orbit through the ecliptic.

In fine, motions of matter subject to regular mechanical laws, acting absolutely or subordinately, generally or locally, on aggregates or atoms, and producing various densities and different degrees of loco-motion and affinity in atoms of matter of different constituent forms, *are the proximate causes of all phenomena*; and, as one series of phenomena depends on another, so all existing phenomena are, in regard to others, physically fit, compatible, and harmonious; and, as matter cannot originate its own motion, so, in considering motion as the proximate cause of all phenomena, we arrive, through the ascending series at

the necessary and sublime FIRST CAUSE of all motion and all phenomena.

PHILLIPS.

NOVEMBER THE SEVENTEENTH.

Origin of Chimneys.

NOTWITHSTANDING the magnificence of the Grecian and Roman architecture, which we still admire in those ruins that remain as monuments of the talents and genius of the ancient builders, it is very doubtful whether their common dwelling-houses had chimneys.

It is difficult to suppose, that the Romans, our masters in the art of building, should not have devised and invented some means to keep free from smoke their elegant habitations, which were furnished and ornamented in a splendid and costly manner. How is it possible that a people who purchased ease and convenience at the greatest expense, should suffer their apartments to be filled with smoke, which must have allowed them to enjoy scarcely a moment of pleasure? And how could their cooks dress in smoky kitchens the various sumptuous dishes with which the most refined voluptuaries covered their tables?

Of the walls of towns, temples, amphitheatres, baths, aqueducts, and bridges, there are some, though very imperfect remains, in which chimneys cannot be expected: but of common dwelling-houses none are to be seen, except at Herculaneum, and there no traces of chimneys have been discovered. The paintings and pieces of sculpture which are preserved, afford us as little information; for nothing can be perceived in them that bears the smallest resemblance to a modern chimney.

Had there been chimneys in the Roman houses, Vitruvius certainly would not have failed to describe their construction, which is sometimes attended with considerable difficulties, and which is intimately connected with the regulation of the plan of the whole edifice. He does not, however, say a word on this subject; neither does Julius Pollux, who has collected with great care the Greek names of every part of a dwelling-house; and Grapaldus, who in later times made a like collection of the Latin terms, has not given a word expressive of a modern chimney.

That there were no chimneys in the tenth, twelfth, and thirteenth centuries, seems to be proved by the *curfew-bell* of the English, and the *fire-covering bell* of the French. In the middle ages, people made fires in their houses in

a hole or pit in the centre of the floor, under an opening formed in the roof; and when the fuel was consumed, or the family went to bed at night, the fire was put out by a cover of wood. In those periods a law was almost every where established, that the fire should be extinguished at a certain time in the evening, and the cover should be put over the fire-place; and that all the family should retire to rest, or at least be at home. William the Conqueror introduced this law into England in the year 1068, and fixed the time at seven in the evening, in order to prevent nocturnal assemblies.

The oldest certain account of chimneys occurs in the year 1347, when at Venice a great number were thrown down by an earthquake. De Gataris says in his History of Padua, that Francesco de Carraro, lord of Padua, came to Rome in the year 1368, and finding no chimneys in the inn where he lodged, because at that time fire used to be kindled in a hole in the middle of the floor, he caused two chimneys, like those which had been long used at Padua, to be constructed and arched by masons and carpenters whom he had brought with him. Over these chimneys, the first ever seen at Rome, he affixed his arms. to record the event.

They are supposed to have been first introduced into England in the course of the 14th century.

NOVEMBER THE EIGHTEENTH.

Vicissitude of Human Affairs. (A Sunday Lesson.)

LET it be remembered, that whatever our habits or opinions of divine placability may be, if the religion we profess be from God, it lies not with man to alter or modify an iota of its letter. Every thing human admits of change and vicissitude; states and empires, arts and sciences, customs and manners, laws and governments, feel, without ceasing, this inevitable principle acting upon them. God, from the throne of his immutability, sports with all the works and enterprises of man; and, willing to show us the little value we should set on things perishable, has decreed that there should be nothing permanent on the face of the earth, but the very vicissitude that marks and agitates it.

My brethren, the true source of all our delusion is a false and deceitful security of life. Thousands pass their accounts around us and we are not instructed; some are

struck in our very arms: our parents, our children, our friends, and yet we stand as if we had shot into the earth an eternal root. Even the most sudden transitions from life to dust, produce but a momentary impression on the dust that breathes. No examples, however awful, sink into the heart. Every instant we see health, youth, beauty, titles, reputation, and fortune, disappear like a flash. Still do we pass gaily on, in the broad and flowery way, the same busy, thoughtless, and irreclaimable beings, panting for every pleasure as before, thirsting for riches and pre-eminence; rushing on the melancholy ruins of one another; intriguing for the employments of those whose ashes are scarce cold; nay often, I fear, keeping an eye on the very expiring, with the infamous view of seizing the earliest moment to solicit their spoils.

Great God! as if the all-devouring tomb, instead of solemnly pronouncing on the vanity of all human pursuits, on the contrary, emitted sparks to rekindle all our attachment to a perishable world! Let me suppose, my brethren, that the number of man's days were inscribed on his brow! Is it not clear that an awful certainty of that nature must necessarily beget the most profound and operative reflection? Would it be possible to banish, even for a moment, the fatal term from his reflection? The nearer he approached it, what an increase of alarm! What an increase of light on the folly of every thing but immortal good! Would all his views and aspirings be confined, as they now are, to the little span that intervenes between his cradle and his grave; and care, and anxiety, and miserable agitation be his lot, merely to die overwhelmed with riches, and blazing with honours.

But if no danger is to be apprehended while the thunder of heaven rolls at a distance, believe me, when it collects over our heads, we may be fatally convinced, that a well-spent life is the only conductor that can avert the bolt. Let us reflect, that time waits for no man. Sleeping or waking, our days are on the wing. If we look to those that are past, they are but as a point. When I compare the present aspect of this city with that which it exhibited within the short space of my own residence, what does the result present, but the most melancholy proof of human instability! New characters in every scene, new events, new principles, new passions, a new creation insensibly arisen from the ashes of the old; which-ever side I look, the ravage of death has nearly renovated all. Scarcely do we look around us in life, when our children are matured,

and remind us of the grave; the great feature of all nature is rapidity of growth and declension. Ages are renewed; but the figure of the world passeth away. God only remains the same. The torrent that sweeps along, runs at the base of his immutability; and he sees, with indignation, wretched mortals, as they pass along, insulting him by the visionary hope of sharing that attribute that belongs to HIM alone.

KIRWAN.

NOVEMBER THE NINETEENTH.

On Philosophy.

PHILOSOPHY in general consists in the knowledge of the reason of things, in opposition to their history, which is the bare knowledge of facts, or to mathematics which is the knowledge of the quantity of things, or their measures. These three kinds of knowledge ought to be joined as much as possible. History furnishes matter, principles, and practical examinations, and mathematics complete the evidence.

Philosophy being the knowledge of the reasons of things, all arts must have their peculiar philosophy, which constitutes their theory. Not only law and physic, but the lowest and most abject arts, are not destitute of their reasons, which might usefully employ the time of the studious.

The bare intelligence and memory of philosophical propositions, without any ability to demonstrate them, is not philosophy, but history only. However, where such propositions are determinate and true, they may be usefully employed in practice, even by those who are ignorant of their demonstrations. Of this we see daily instances in the rules of arithmetic, practical geometry, and navigation; the reasons of which are often not understood by those who practise them with success.

We have said, that philosophy is the reasons of things. It may be asked, what are the reasons of things? or what is the explication of phenomena of facts? An ingenious author tells us, that the explication consists only in showing the conformity any particular phenomenon has to the general laws of nature; or, which is the same thing, in discovering the uniformity there is in the production of natural effects. This is evident to any one who shall attend to the several instances wherein philosophers pretend to account for appearances.

By a diligent observation of the phenomena within our view we may discover the general laws of nature, and from

thence deduce, though not demonstrate, other phenomena, all deductions of this kind depending on a supposition that the Author of Nature always operates uniformly, and in a constant observation of those rules we take for principles which we cannot evidently know.

NOVEMBER THE TWENTIETH.

On Philosophy and its Divisions.

LOVERS of truth and enquirers after truth, were, among the Greeks, called *philosophers*; and therefore the general objects of their pursuits acquired the name of PHILOSOPHY. The Greek philosophers attached themselves to certain Schools conducted by respectable teachers; and hence in time the doctrines of the schools were adopted on the authority of the masters, and philosophy was founded on reasoning rather than on facts. The authority of the doctrines of ARISTOTLE, the founder of the Peripatetic School, absurd as many of those doctrines were, prevailed in all Universities about 1800 years.

At length reasoning from experiment, rather than from assumed principles, was recognized as the true basis of philosophical enquiry. COPERNICUS in Poland, GALILEO in Italy, and BACON in England, were the founders of this new system, which may be regarded as the true road to the knowledge of nature.

The theories of Aristotle and his disciples had, however, so far interwoven themselves with the studies of mankind, that subsequent philosophers have not even yet been able to divest themselves of his occult and innate properties of mere matter. Experiments have therefore been made in subordination to the arbitrary assumptions of Aristotle; and as these are almost universally erroneous, so little or no progress has been made in discovering the Causes of natural phenomena; and, for two centuries, mankind have chiefly been employed in registering phenomena, generally with special reference to the pre-established theories of Aristotle.

KEPLER and NEWTON followed Galileo and Bacon; but as they recognized those active principles of inert matter which had been invented by the Aristotelians, and taught the existence in particular bodies of innate powers of their own kind, (all of which may nevertheless be referred to atomic forms and special motions,) so experiments made in subservience to such errors have mul-

tiplied difficulties, rendered nature inconsistent with itself, and brought uncertainty and ridicule upon the most sublime of human pursuits. It is at length taught, that matter in various forms affected by motion, is the sole general cause of all phenomena.

Moral philosophy is that practical species which lays down the rules of a virtuous and happy life. Most authors divide it into two kinds, answerable to the two sorts of human actions to be directed; first, *Logic*, which governs the operations of the understanding; and, secondly, *Ethics*, which direct those of the will.

NOVEMBER THE TWENTY-FIRST.

The Coal-Mines of England.

ENGLISH coal is of great repute even in foreign countries, and forms a considerable article of commerce. The principal of them are at and near Newcastle-upon-Tyne.

The Northumbrian coal-mines are very subject to fire-damps by which men have often been killed, maimed, or burnt. Some have been blown up at the mouth of the works; and the whole of the works have often been known to be shattered to pieces and completely destroyed. The fire-damp is a vapour, which, being touched by the workmen's candles, presently takes fire, giving a report like a gun, and producing all the effects of lightning. To prevent these mischiefs, the miners now use no candles in their work, but the safety lamp, invented by Sir H. Davy, which gives light through masses of fine wire without the possibility of igniting the vapour.

From the mines of Kingswood in Gloucestershire, the city of Bristol is supplied with coals; but no part of England affords such prodigious quantities of this servicable mineral as the pits in Northumberland and Durham. The coals from Newcastle are sent by sea to all parts of England and Scotland, and also to Holland, and, in time of peace, to France and Flanders. The city of London alone is reckoned to consume annually at least 600,000 chaldrons, each chaldron containing six-and-thirty bushels; yet it is calculated that they will not be exhausted in 300 years.

Whitehaven is the second most eminent port in England for its coal-trade. From hence the city of Dublin and all the towns of Ireland on the coast, as well as some parts of Scotland, and the Isle of Man, are supplied. Cannel, or candle-coal, which is found in some of the

northern counties, particularly in Lancashire, is light and glossy; cleaves into thin flakes, and, when kindled, yields a continual blaze till it is consumed to ashes. Its hardness renders it capable of a fine polish; and standishes, cups, candlesticks, &c. are frequently made of it.

There is a kind of coal dug up in Staffordshire, called peacock-coal; because, when turned to the light, it shows all the colours in the peacock's train. Another kind called wood-coal, from its colour and softness, which indicate that it has recently been converted from wood into coal, is dug up in Derbyshire.

The business of a miner was lately rendered dangerous by explosions of gas; but it being discovered that metal wire stops the passage of flame, *safety lamps* have been constructed which give light without danger of explosion.

NOVEMBER THE TWENTY-SECOND.

The Lead-Mines in Somersetshire.

THE lead-mines of the Mendip hills in Somersetshire afford vast quantities of this useful metal. The ore sometimes runs in veins, is at others dispersed in banks, and often lies between rocks. Some of it is hard, and some soft. There is a spar about it which is white, transparent, and brittle, like glass; and another substance called crootes, which is a white stone, soft, mealy, and marled with ore. That ore is best which is clearest and heaviest, and of which thirty-six hundred weight will yield a ton of lead. The soil about these mines is red and stony; and the stones that are washed by the brooks and springs are ponderous, and of a reddish colour.

The miners work by the light of candles, which, if they have enough, will last three or four hours. They seldom meet with damp, but water occasionally breaks in upon them: in which case they drive an *adit*, or new passage, upon a level till it is dry. To empty the water out of the mines, they use leathern bags that will each hold eight or nine gallons, which are drawn up to the top by ropes and pulleys.

The tools with which they work are so hardened as to make an impression upon the head of an anvil; and yet they often break in an hour's time. When they meet with a black stone, they reckon it a bad sign, as leading to a rock that will hinder their works; the nearness of which is also indicated by a short brittle clay. Having got the

ore out of the mine, they beat it small, wash it in a running stream, and sift it in iron sieves. Then upon a hearth, or furnace, they lay a quantity of oaken gads, which they light with charcoal, and blow with bellows worked by men's feet. When the fire-plate is hot, they throw the ore on the wood, which melts down into the furnace, whence they take it out with an iron ladle, and cast it upon sand into what form they please. The smoke of the lead is a very great annoyance to the workmen, and subjects them to a mortal disease, as it does the cattle that are suffered to graze thereabout. The adjacent trees also have their tops burnt, and their leaves and bark discoloured.

NOVEMBER THE TWENTY-THIRD.

The Copper-Mines of Cornwall.

No part of Europe affords richer copper than Cornwall, though the mines have not been worked with considerable advantage much more than ninety years. It is there discovered in a vast variety of ores, the most common of which is of a yellow brass-colour; but there are also red, grey, black, blue, green, and peacock ore; the latter yields but little copper; the grey contains more metal than the yellow, and the red more than the grey. There are, besides, in most of the mines, considerable quantities of malleable copper, which, from its purity, the miners call virgin ore. This is naturally alloyed with various substances; sometimes with rock-crystal, sometimes with a gravelly clay, and at others with the rust of iron. Its figure also is very various; being sometimes in thin plates, shaped like leaves; sometimes in drops and lumps; sometimes branched, fringed, or twisted into wires; sometimes crossed at the top like a dagger; and at others resembling hollow fillagree work.

It has also been found in powder, little inferior in lustre to gold, and in solid masses of several pounds weight, unmixed, and highly polished.

The water in which the copper-ore is washed, is converted by evaporation into blue vitriol for the dyers: and that which comes from the bottom of the mines is strongly impregnated with copper.

There is a mineral found in *tin-mines*, called mundic, which the tanners formerly separated from the tin, because it made it thick and curdy; whence it was thrown aside and neglected; but experiments have lately been made upon it, and this once useless ore affords as good copper as that of Sweden.

Cornwall also produces lead and iron, together with a great variety of crystals, and a considerable number of semi-metals, as speltre, bismuth, zinc, antimony, lapis calaminaris, black-lead, and cobalt. Here are likewise some quarries of marble, and a stone called the warming-stone, which, on being once heated, will continue warm eight or ten hours. In a copper-mine near Redruth, on the north-coast, is found the swimming-stone. It consists of rectilinear laminæ as thin as paper intersecting each other in all directions, and leaving unequal cavities between them—a structure which renders the stone so cellular as to swim in water. Here have likewise been found several kinds of the asbestos, a stone so fibrous, that a kind of linen has been made of it, which is capable of resisting the action of fire.

NOVEMBER THE TWENTY-FOURTH.

The Tin-Mines of Cornwall.

AMONG the various metals and minerals produced in England, none is more considerable than its tin; the greatest part of Europe being supplied with that article from the mines in Cornwall.

How long the tin-mines have been discovered or worked cannot be exactly ascertained; but it is certain that the ancient Britons, if not the Romans, converted them to their advantage. Under the Saxons they appear to have been neglected; but after the coming of the Normans, they produced very considerable revenues to the earls of Cornwall, particularly to Richard, brother of King Henry III. Several regulations were afterwards made to encourage adventurers; a charter and various immunities being granted by Edmund, earl Richard's brother, who also framed and ratified the stannary laws, laying a certain duty upon tin, payable to the earls of Cornwall. Edward III. confirmed the tanners in all their privileges, and erected Cornwall into a dukedom, with which he invested his son, Edward the Black Prince: and since that time the heirs apparent to the crown of England, if eldest sons, have enjoyed it successively.

The working of the tin-mines is extremely difficult; not only on account of the great depth to which the workmen are sometimes obliged to sink their shafts or pits, but also because the rocks through which a passage is to be cut are so hard that they can scarcely dig a foot in a week.

The soft shaking earth found in these mines is also very troublesome, on account of the unwholesome vapours it exhales, and the currents of water that frequently issue from it. When the ore is dug and drawn out of the mine, it is broken to pieces with large hammers, and then carried to a stamping-mill, where it is pounded still smaller, and the water passing through, washes away the earthy parts, leaving the metallic ones behind. It is then dried in a furnace on iron plates to drive off the arsenic with which it is combined, and ground to powder in a mill, after which it is again washed and dried, and in this state the metallic matter is called black tin.

To convert it into white tin, or metal, they carry it to a furnace, where, by means of a charcoal fire, kept up by very large bellows, it is smelted; and when cold they forge it, which is the last thing done to it in the works. Two pounds of black tin, when melted, yield about one of white. It is remarkable that the dross or scoria skimmed off the tin in fusion, and melted down with fresh ore, runs into metal; and even the matter washed and separated from the metal in the mill, being thrown up in heaps, after resting six or seven years, will, by *felching* over again, as they call it, yield as good tin as that of Germany.

NOVEMBER THE TWENTY-FIFTH.

On the Obligation to relieve the Poor. (A Sunday Lesson.)

WHETHER pity be an instinct or a habit, it is in fact a quality which God appointed: and the final cause for which it is appointed is to afford to the miserable, in the compassion of their fellow-creatures, a remedy for those inequalities and distresses which God foresaw many must be exposed to, under every general rule for the distribution of property.

Beside this, the poor have a claim founded in the law of nature, which may be thus explained: all things were originally common: no one being able to produce a charter from heaven, had any better title to a particular possession than his next neighbour. There were reasons for men's agreeing upon a separation of this common fund; and God, for these reasons, is presumed to have ratified it. But this separation was made and consented to, upon the expectation and condition that every one should have a sufficiency for his subsistence, or the means of procuring

it; and as no fixed laws for the regulation of property can be so contrived as to provide for the relief of every case of distress which may arise, these cases and distresses, when their right and share in the common stock were given up or taken from them, were supposed to be left to the voluntary bounty of those who might be acquainted with the exigencies of their situation, and able to afford assistance. And therefore, when the partition of property is rigidly maintained against the claims of indigence and distress, it is maintained in opposition to the intention of those who made it, and to *His*, who is the supreme proprietor of every thing, and who has filled the world with plenteousness for the support and comfort of all whom He sends into it.

The Scriptures are more copious on this duty than upon almost any other. The Apostles also describe this virtue as propitiating the Divine favour in an eminent degree; and these recommendations have produced their effect. It does not appear that before the times of Christianity an infirmary, hospital, or public charity of any kind, existed in the world; whereas most countries in Christendom now abound with these institutions. PALEY.

NOVEMBER THE TWENTY-SIXTH.

The Iron-Works of England.

IRON, with respect to real usefulness, is the most valuable of all the metals; and of which our island produces the greatest quantities.

The iron-works of the forest of Dean, in Gloucestershire, and those of Shropshire, are the most perfect and extensive. The ore is found there in great plenty, differing much in colour, weight, and goodness.

The best, called brush ore, is bluish, very heavy, and full of little specks that shine like silver. This affords the greatest quantity of iron; but if melted alone, the metal is very brittle, and therefore not so fit for common use. To remedy this, they mix it with a due quantity of cinder, (which is the refuse of the ore after the metal has been extracted,) and this gives it such an admirable toughness, as makes it equal to any that is brought from foreign countries.

After the workmen have dug up the ore, their first business is to calcine it, which is done in kilns, much like

our ordinary lime-kilns. These they fill to the top with coal and ore, a layer of each alternately; then setting fire to the bottom, they let it burn till the coal is wasted, and renew the kilns with fresh ore and coal in the same manner as before.

This does not melt the metal, but consumes the drossy part of the ore, and makes it malleable, serving instead of the beating and washing used with other ores.

After this operation it is carried to the furnaces, which are built of brick or stone, about thirty feet high, and somewhat resembling the shape of an egg, being about ten feet wide in the middle, but much narrower at the top and bottom. Behind the furnace are fixed two large pairs of bellows, the pipes of which meet at a little hole near the bottom. These are worked by a large wheel turned by water, and are so contrived as to play alternately, one giving the blast while the other is rising.

The furnace is filled with ore and cinder, intermixed with charcoal, which being set on fire, the materials run together into a hard cake or lump, and the metal as it melts trickles down into receivers at the bottom of the furnace, where there is a passage open for the men to take away the scum and dross, and let out the metal as they see occasion. Before the mouth of the furnace lies a great bed of sand, wherein they make furrows of what shape they please; and when the receivers are full the metal is let into them.

In this manner they keep the furnaces constantly employed for many months together, never suffering the fire to slacken night or day, but still pouring in at the top a fresh supply of ore and fuel, which in these works is always charcoal. And hence the iron is carried to the forges, where it is worked into bars.

NOVEMBER THE TWENTY-SEVENTH.

The Thermometer and Barometer.

THE *Thermometer* is an instrument designed to show the various degrees of heat by means of the expansive power of fluid bodies. Various methods and forms of constructing it have been thought of at different times. Air, oil, spirit of wine, and mercury, have been successively employed in this experiment.

The most common thermometer is that made with mer-

cury: A glass ball, fixed to the bottom of a narrow tube is filled with purified mercury, and the top of the tube is hermetically sealed, which secures it from the action of the air. Then as the mercury expands in bulk very considerably, as the heat of the air increases, the spirit contained in the ball is dilated, and it consequently ascends in the tube. As the heat decreases, the mercury is compressed, and it consequently descends. The different degrees of heat and cold are therefore known by the ascent and descent of the quicksilver, measured by a graduated scale on the board to which the tube is affixed.

The *Barometer* is another very useful instrument for ascertaining changes of weather, by determining the variations in the weight, pressure, or elasticity, of the atmosphere. It has been found by experiment that a column of air from the surface of the earth to the upper regions of the atmosphere, is equal in weight to a column of water of the height of thirty-three feet, or to a column of mercury of the height of twenty-nine inches and a half. On this principle the barometer is made.

A glass tube of suitable length, stopped at one end, is exhausted of its air; the open end is then immersed in a small vessel filled with quicksilver: which is immediately forced, by the pressure of the atmosphere, into the vacuity in the tube, to the height equal to the weight of the atmosphere. As this weight, or density, or elasticity, increases, the quicksilver of course rises, and as it diminishes, the quicksilver necessarily falls, and the exact proportions are expressed on the scale engraved on the board to which the tube is affixed.

The rising and falling of the mercury, are considered as indicating, in a certain degree, expected changes in the weather.

NOVEMBER THE TWENTY-EIGHTH.

The Invention and Progress of Printing.

To the art of printing we chiefly owe our deliverance from ignorance and error; the progress of learning; the revival of the sciences; and numberless improvements in the arts, which, without this noble invention, would have been either lost to mankind, or confined to the knowledge of a few.

Thus the art of printing deserves to be considered with

respect and attention. From the ingenuity of the contrivance, it has ever excited mechanical curiosity; from its intimate connection with learning, it has justly claimed historical notice; and from its extensive influence on morality, politics, and religion, it is now become a very important speculation. Coining, and taking impressions in wax, are of great antiquity, and the principle is precisely that of printing. The application of this principle to the multiplication of books, constituted the discovery of the art of printing. The Chinese have for many ages printed with blocks, or whole pages engraved on wood; but the application of single letters or moveable types forms the merit and the superiority of the European art.

The honour of giving rise to this method has been claimed by the cities of Harlem, Mentz, and Strasburg; and to each of these it may be ascribed in some degree, as printers resident in each made successive improvements in the art.

It is recorded by a reputable author, that one Laurentius of Harlem, walking in a wood near that city, cut some letters upon the rind of a beech-tree, which for fancy's sake, being impressed upon paper, he printed one or two lines for his grandchildren: and this having succeeded, he invented a more glutinous ink, because he found the common ink sunk and spread; and then formed whole pages of wood, with letters cut upon them, and (as nothing is complete in its first invention) the backsides of the pages were pasted together, that they might have the appearance of manuscripts written on both sides of the paper.

These beechen letters he afterwards changed for leaden ones, and these again for a mixture of tin and lead, as a less flexible and more solid and durable substance. He died in 1440, and we may suppose his first attempt to have been about 1430.

From this period printing made a rapid progress in most of the principal towns of Europe, superseded the trade of copying, which was till then very considerable, and was in many places considered as a species of *black art* or *magic*. In 1490 it reached Constantinople, and was extended by the middle of the following century to Africa and America. It was introduced into Russia about 1560: but, from motives either of policy or superstition it was speedily suppressed by the ruling powers.

Before 1465, the uniform character was the old Gothic or German-text; but in that year a book was printed in a

kind of semi-Gothic of great elegance, and approaching nearly to the present upright Roman type, which latter was first used in Rome in 1467. Toward the end of the fifteenth century, Aldus invented the *Italic* character.

It was for a long time supposed that printing was first introduced and practised in England by William Caxton, a mercer and citizen of London; who by many years' residence in Holland, Flanders, and Germany, had informed himself of the whole process of the art, and by the encouragement of the great, set up a press in Westminster Abbey in the year 1471. But a book has since been found, with a date of its impression from Oxford in 1468, and is considered as a proof of the exercise of printing in that university several years before Caxton began to practise it in London.

NOVEMBER THE TWENTY-NINTH.

Observations of one who was born blind, and obtained his Sight by Couching.

He thought scarlet the most beautiful of all colours; of the rest, the most gay were the most pleasing; but the first time he saw black he was very uneasy, and the sight of a negro woman some months after struck him with horror.

When he first obtained his sight, he was so far from having any idea about distance, that he thought all objects touched his eyes, and none were so agreeable as those which were smooth and regular, but he could form no opinion as to what it was that pleased him.

Upon being told the names of things, the form of which he before knew from feeling, he would carefully observe them, that he might know them again; and he often complained, "that he learned to know, again to forget, a thousand things in a day."

He was much surprised that the persons and things which from feeling he had liked best, did not always appear the most agreeable to his sight; and he evidently expected that those persons whom he most loved, would appear most beautiful, and that those things which were most agreeable to taste, should be so to vision.

It was not till two months after he was couched, he discovered that pictures merely represented solid bodies, and even then when he found that those parts which,

from their shades appeared round and uneven, felt flat like the other parts, he was amazed, and asked which was "the lying sense," the touch or vision. Being shown his father's likeness, in a locket, he acknowledged the resemblance, and was much surprised that a large face could be expressed in so little room, saying, it seemed as impossible to him "as to put a bushel of any thing into a pint measure."

At first he could bear very little light, and he thought the things he saw extremely large; upon seeing larger objects, and comparing them with the former, he remarked a difference in size between them; but he was unable to imagine any dimensions beyond those immediately in view, and though he knew the room he was in was only a part of the house, yet he could not conceive that the whole house could look bigger than the room did.

He said his principal reason for submitting to be couched was, "that he might be able to read and write." He did not suppose that he could have more pleasure in walking abroad than in the garden, which he could do readily and with safety; and added, that even blindness had this advantage, that he could go any where in the dark, much better than those who could see.

Every new object was, he said, a new delight to him; and being taken to Epsom Downs, and observing an extended prospect, he was greatly pleased, and called it "a new kind of feeling."

MONTHLY MAGAZINE.

NOVEMBER THE THIRTIETH.

Natural History of the Wasp.

THE wasp is well known to be a winged insect with a sting, to be longer in proportion to its bulk than the bee, to be marked with bright yellow circles round its body, and to be the most swift and active insect of all the fly kind. On each side of the mouth this animal is furnished with a long tooth, notched like a saw, and with these it is enabled to cut any substance, even meat, and to carry it to its nest. Wasps live like bees in community, and sometimes ten or twelve thousand are found inhabiting a single nest.

The nest of the wasp tribe is one of the most curious objects in natural history. Their principal care is to seek out a hole that has been begun by some other animal; and

when they have chosen a proper place they set to work with wonderful assiduity, getting pieces of wood from the rails and posts which they meet with in the fields and elsewhere. These they saw and divide into a multitude of small fibres, of which they take up little bundles in their claws, letting fall on them a few drops of gluey matter with which their bodies are provided, by the help of which they knead the whole composition into a paste, and with this make their walls and partitions; treading it close with their feet, trowelling it with their trunks, still going backward as they work, and strengthening every partition with layer upon layer, in proportion to the size or convenience of the general fabric.

Though the wasp can gather no honey of its own, no animal is more fond of sweets. For this purpose it will pursue the bee and the humble-bee, destroy them with its sting, and then plunder them of their honey-bag, with which it flies triumphantly loaded to its nest to regale its young.

Such is the dread with which these little animals impress all the rest of the insect tribes, which they seize and devour without mercy, that they vanish at their approach. Wherever they fly, like the eagle or the falcon, they form a desert in the air around them. In this manner the summer is passed in plundering the neighbourhood, and rearing up their young; every day adds to their numbers; and from their strength, agility, and indiscriminate appetite for every kind of provision, were they as long-lived as the bee, they would soon swarm upon the face of nature, and become the most noxious plague of man; but providentially their lives are measured to their mischief, and they live but a single season. The winter is insupportable to them; and before the new year commences they perish all but one or two females in every nest, who begin in spring to lay their eggs in a little hole of their own contrivance.

BUFFON

DECEMBER THE FIRST.

Phænomena of the Month of December.

THE changes which take place in the face of Nature during this month, are little more than so many advances in the progress toward universal gloom and desolation.

The day rapidly shortens, and the weather becomes foul and cold.

In our climate, however, no great and continued severity of cold usually takes place before the close of the month.

Several of the wild quadrupeds now take to their winter concealments, which they either seldom or never quit during the winter. Of these, some are in an absolutely torpid or sleeping state, taking no food for a considerable time; others are only drowsy and inactive, and continue to feed on provisions which they have hoarded up. In this country few become entirely torpid.

Bats retire early to caves and holes, where they remain the whole winter, suspended by the hind-feet, and closely wrapped up in the membranes of the fore-feet. As their food is chiefly insects, they can lay up no store for the winter, and therefore must be starved, if nature did not thus render food unnecessary for them. Dormice also lie torpid the greatest part of the winter, though they lay up stores of provision. A warm day sometimes revives them; when they eat a little, but soon relapse into their former sleepy condition.

Squirrels, and various kinds of field-mice, provide magazines of food against winter, but are not known to become torpid. The badger, the hedge-hog, and the mole, keep close in their winter-quarters in the northern regions, and sleep away great part of the season.

The only vegetables which now flourish are the numerous tribes of mosses, and the *lichens*, or liverworts. Lichens cover the ditch-banks, and other neglected spots, with a leather-like substance, which in some countries serves as food both to men and cattle. The rein-deer lichen is the greatest treasure of the poor Laplanders, who depend upon it for the support of their only species of domestic cattle during their tedious winters.

On the 21st of December happens the shortest day when the sun is not quite eight hours above the horizon in these islands. About 15 degrees to the northward of these islands the sun does not rise at all, and a continued night lasts weeks or months, according to the distance from the north pole. But on the contrary, to the countries near the south pole it is at this period perpetual day, and every where to the south of the equator it is summer. As our summer advances their winter approaches.

The festival of Christmas occurs very seasonably to

cheer this comfortless period of the year in our northern hemisphere. Great preparations are made for it in the country, and plenty of dainties are provided for its celebration according to the rites of ancient hospitality. Thus the old year steals away; and a new one begins with lengthening days and brighter skies, inspiring fresh hopes and expectations.

AIKIN.

DECEMBER THE SECOND.

Eulogy on Christianity. (A Sunday Lesson.)

CHRISTIANITY, the source of every private and public virtue, and, if it be not a fable, so absolutely decisive of our destiny for ever! Surely on a point so important, it is wisdom to use some caution and deliberation, to look before we venture on so dangerous a leap!

My friends, the great source of infidelity is not in the understanding of man, it is in the pride and corruption of his heart; well has the prophet compared the impious man to a tempestuous sea, which, tormented by the winds, vomits upon its shore a tide of slime and impurity. Be not surprised at the boldness of the metaphor. It is exactly applicable to those geniuses who make the sacred objects of our belief the butt of their ridicule and scorn.

This is not an occasion on which I can collect and display the proofs that support revelation; but show me a man whose moral character evinces that he has no interest in desecrating them; who, perfectly divested of pride, prejudice, and passion, will carefully examine them; will trace, and, when he has traced them, will candidly acknowledge the exact and most literal accomplishment of the Scripture prophecies, that invincible stumbling-block in the way of all objectors to Christianity; will admit that its original establishment in the face of all human opposition is any evidence of divine original; that certitude, moral and historical, and facts the most palpable, are a test of truth in any cause whatsoever; that the assent of the most virtuous and enlightened men in every age of the Christian world, down to the present hour, carries any weight with it; that our religion, if false, could have still kept its ground in so many nations of the earth, amidst the increase of human knowledge, and unceasing variation of all human things; and after such an inquiry, and such acknowledgments, will still persist in unbeliev-

ing; I will then confess that real and deliberate incredulity is not a chimera.

But I am bold to say, that such an example will never be found; or if ever it should, it will be a singularity not to be accounted for on any known principle of the human mind, and, therefore, would make nothing against the natural strength of the argument.

No, it is invariably the passions of men that impel them to throw aside the yoke of religion; of men, whose open and declared profligacy of manners, haunted by the spectre of future retribution, is not the spring of their revolt; no, it is pride, it is the vanity of rising superior to received opinions, of being thought wiser and more intelligent than the multitude, whom they would represent as dragging their steps amidst a night of prejudices; following their teachers with an abashed head, and equally born to creep under the tyrants of their reason, as under those of their liberty.

Consequently we see religion attacked, not by argument, but by sophistry, misrepresentations, wit, irony, ridicule, apocryphal anecdotes, vain and puerile declamations, and all such arts as impose on the understanding, and carry away the suffrage of superficial hearers, who never fail to think themselves convinced, when they are delighted and amused.

Oh, divine religion! let thy ministers be silent; thou standest not in need of their assistance, thy cause is at last become the cause of all society, the delusion is dissipated, every eye is opened, impiety is at length wounded with its own sting, it is betrayed by its own excesses, it is even terrified at the horrors it has occasioned! May we profit, my friends, by the awful lesson! May religion resume a glorious empire among us! the protection of heaven be assured, and this island be happy.

KIRWAN.

DECEMBER THE THIRD.

Against Cruelty to Animals.

EVERY man possessing the faculties of a rational being feels, and will avow, that if he be put to unnecessary and unmerited pain by another man, his tormentor would be guilty of an act of injustice towards him. Therefore the rational and just man will not put another man to unnecessary and unmerited pain; nor will he take advantage of his own superiority of strength, or of the

accidents of fortune, to abuse them to the oppression of his inferior; because he knows that in point of feeling, all flesh are equal; and that the difference of strength and station is as much the gift of God, as the difference of understanding, colour, or stature.

Superiority of rank or station may give ability to communicate happiness, and seems so intended, but it can give no right to inflict unnecessary pain. A wise man would be unworthy the blessing of a good understanding, if he were thence to infer that he had a right to despise a fool, or put him to any degree of pain. The folly of the fool ought rather to excite his compassion; and demands, in reason and justice, the wise man's care and attention to one that cannot take care of himself.

It has pleased the Creator of the universe to cover some men with white skins and others with black skins: but as there is neither merit nor demerit in complexion, the white man (notwithstanding the barbarity of custom and prejudice) can have no right, on account of his colour, to enslave and tyrannise over a black man: any more than a tall man, on account of his size, has any legal right to trample a dwarf under foot.

Now if, among men, the difference of their powers of mind, of their complexion, stature, and the accidents of fortune, do not give to any one man a right to abuse or insult another man on account of these differences, — for the same reason a man can have no just or natural right to abuse and torment a beast, merely because it has not the mental powers of a man. For such as man is, he is but as God made him, and the very same is true of the beast. Neither can lay claim to any intrinsic merit, for being such as they are; for before they were in existence it was impossible that either could deserve distinction; and at the moment of their creation, their bodily shapes, perfections, and defects, were invariably fixed, and their limits appointed, beyond which they cannot pass. And being such, neither more nor less than they were created, there is no more demerit in animals being animals, than in man being man.

PRIMAT.

DECEMBER THE FOURTH.

Further Observations on Cruelty to Animals.

AN animal is no less sensible of pain than a man. He has similar nerves and organs of sensation; and his

cries and groans in case of violent impressions upon his body, though he cannot utter his complaints by speech, are such indications of his sensibility of pain as it is impossible to misunderstand.

As the difference of height or colour among men constitutes no difference in their susceptibility of pain, neither does the shape of the animal exempt him from the sense of feeling. And if the difference of complexion or stature does not give one man a right to despise or torment another, the difference of shape between a man and a beast cannot authorise man to abuse or torment the brute creation, however insignificant and however formed.

With regard to the modification of the mass of matter of which an animal is formed, it is solely owing to the will of the Supreme Being, whether we are created animal or man. He that formed man of the dust of the ground, and endowed him with the sense of feeling, could have cast the same dust into the mould of any beast, which being animated by the life-giving breath of its Maker, would have become a *living soul* in that form. And if in the brute shape we had possessed the same degree of reason and reflection we now enjoy, and other beings of human shape had abused, tormented, and barbarously ill-treated us, because we partook not of their outward shape, — their folly, cruelty, and injustice, would be self-evident to us, and we should naturally infer that, whether we walk upon two legs or four, whether our heads are prone or erect, whether we had horns or no horns, long ears or round ears, or whether we brayed like an ass, spoke like a man, whistled like a bird, or were mute, harmless, and defenceless, as a fish, nature never intended that these distinctions should establish a right to tyrannise and oppress.

In cases of cruelty from men to men, the sufferer has a tongue to complain, and a finger to point out the oppressor: all men unite in condemning the inhumanity, and demand the punishment of the offender. But the poor defenceless animal, bird, fish, or insect, can neither utter his complaint, nor describe the author of his wrong.

In the case of human cruelty, there are laws and courts of justice in every civilised country, to which the injured man may make his appeal, and demand redress; but no friend, no advocate, is to be found among the brute creation, to prefer an indictment in behalf of an injured animal against the tyrant man.

In various ways man may make amends to man for

wrongs done to him; the sufferer's wants may be relieved, his fortunes advanced, and he may be rendered by the repentance of his oppressor happier than he was before. But where is the recompense to be found for a wretched animal, if by thy passion or sportive cruelty thou hast inflicted torment on him, broken his limbs, or deprived him of his eye-sight or other comforts? He wants not thy money nor thy clothes. Thou canst remove him to no other station but that in which Providence has placed him; the voice of thy compassion he cannot understand. Thou hast destroyed his little all of happiness, thou hast committed an injury which thou never canst repair. If thou dost not repent, thou art unworthy of the name of a rational being; yet is thy deepest remorse unsatisfactory and unavailing to the defenceless and helpless creature on whom thy crime was unthinkingly perpetrated.

PRIMAT.

DECEMBER THE FIFTH.

Invention of Clocks and Watches.

CLOCKS, moved by wheels and weights, first began to be used in the monasteries in Europe about the eleventh century. It does not, however, appear that Europe is entitled to the honour of this invention; but that it is rather to be ascribed to the Saracens, to whom we are indebted for most of the mathematical sciences.

Clocks hitherto had been, as it were, shut up in monasteries, but they began to be employed for the common use and convenience of cities some time in the thirteenth and the fourteenth centuries. Hubert, prince of Carrara, caused the first clock that ever was publicly erected to be put up at Padua. The greater part however of the principal cities of Europe were for several ages without striking clocks, as they could not be procured at even a great expense. Towards the end of the fifteenth century, clocks began to be in use among private persons.

About this period, also mention is first made of watches, which it appears were used in London in the reign of Henry VIII. Dante was the first author who mentions a clock that struck the hour; he was born in 1265, and died in 1321, so that striking clocks could not have been very uncommon in Italy at the latter end of the thirteenth century or the beginning of the fourteenth.

But the use of clocks was not confined to Italy at this period; for we had an artist in England about the same time, who furnished the famous clock-house near Westminster-Hall, with a clock to be heard by the courts of law, out of a fine imposed on the chief justice of the king's bench, in 1288.

In the infancy of this new piece of mechanism, they were probably of a very imperfect construction, perhaps never went tolerably, and were soon deranged, whilst there was no one within a reasonable distance to put them in order. To this day the most musical people have seldom a harpsichord in their house, if the tuner cannot be procured from the neighbourhood. We find therefore that Henry VI. of England, and Charles V. of France, appointed clock-makers, with a stipend, to keep the Westminster and Paris clocks in order.

It need scarcely be observed also, that as the artists were so few, their work must have been charged accordingly, and that kings only could be the purchasers of what was rather an expensive toy, than of any considerable use. And it may perhaps be said, that they continued in a great measure to be no better than toys till the middle of the seventeenth century. Add to this, that in the thirteenth and fourteenth centuries there was so little commerce, intercourse, or society, that an hour-glass or the sun was sufficient for the common purposes, which are now more accurately settled by clocks and watches of modern construction. Dials and hour-glasses likewise wanted few or no repairs.

DECEMBER THE SIXTH

The Sugar-Cane.

THE mountains of Jamaica are in general crowned with trees of a thousand different species, ever verdant, forming beautiful groves and cool retreats. The valleys also are generally verdant, being refreshed with many streams, and adorned with plantations of choice and valuable plants, particularly the sugar-cane.

The reed or cane which yields us such an agreeable juice, is like the reeds we generally see in morasses and on the edges of lakes; except that the skin of these latter is hard and dry, and their pith void of juice, whereas the skin of the sugar-cane is soft, and the pith very juicy,

though in a greater or less degree according to the goodness of the soil, its exposure to the sun, the season it is cut in, and its age; which circumstances contribute equally to its goodness and its bulk. The sugar-cane usually grows to the height of six or seven feet, sometimes higher, exclusive of the long green-tufted leaves at top, from the middle of which rise the flower and the seed. The stem or stalk is divided by knots or joints, whence likewise shoot out leaves, but these usually fall as the cane rises; and it is a sign that the cane is not good, or that it is far from its maturity, when the knots are beset with leaves. The cane is yellowish when ripe, and about an inch in diameter.

When the canes are ripe, they are cut up one at a time with a proper instrument, being too large to be mowed by a scythe. The canes are then bundled up into faggots, and carried to the mills, which are very curious machines, contrived to bruise them, and press out the liquor or juice they contain. These mills are composed of three wooden rollers, covered with plates of iron, and are of four kinds, being turned either by slaves, water, wind, or cattle.

The juice pressed from the canes is conveyed by a leaden canal into the sugar-house, where it passes successively into a number of coppers or caldrons, heated by different degrees of fire; by which process the juice of the canes is purified, thickened, and rendered fit to be converted to any of the kinds of sugar.

In New England and Canada a sort of sugar is obtained from the juice of the maple-tree by boiling it. A good tree will yield twenty gallons of juice; and this sugar is said to exceed that of the cane in its medicinal virtues. — Sugar has also been made in large quantities in Prussia and France, from an extract of beet root.

DECEMBER THE SEVENTH.

Invention of Coaches.

COVERED carriages were known to the ancients, but fell into disuse till the beginning of the sixteenth century. — They were then, however, used only by women of the first rank, for the men thought it disgraceful to ride in them. But the emperor of Germany, kings, and princes, about the end of the fifteenth century, began to employ covered

carriages on journeys, and afterwards on public solemnities.

The oldest carriages used by the ladies in England were known under the now-forgotten name of *whirligigtes*. When Richard II., towards the end of the fourteenth century, was obliged to fly before his rebellious subjects, he and all his followers were on horseback; his mother only, who was indisposed, rode in a carriage. This, however, became afterwards somewhat unfashionable, when that monarch's queen, Ann, the daughter of the emperor Charles IV. showed the English ladies how gracefully and conveniently she could ride on a side-saddle. Whirligigtes were laid aside, therefore, except at coronations, and other public solemnities.

Coaches were first known in England about the year 1580, and, as Stow says, were introduced from Germany by Fitzallen earl of Arundel. Anderson places the period when coaches began to be in common use, about the year 1605. The celebrated duke of Buckingham, the favourite of James and Charles, was the first person who rode with a coach and six horses, in 1619. To ridicule this new pomp, the earl of Northumberland put eight horses to his carriage.

Towards the end of the sixteenth century. John of Finland, on his return from England, among other articles of luxury, brought with him to Sweden the first coach. Before that period, the greatest lords in Sweden, when they travelled by land, carried their wives with them on horseback. The princesses even travelled in that manner, and when it rained took with them a mantle of wax-cloth.

Coaches to be let for hire were first established at London in 1625. At that time there were only twenty, which did not stand in the streets, but at the principal inns. — Ten years after, however, they were become so numerous, that king Charles I. found it necessary to issue an order for limiting their number. In the year 1637, there were in London and Westminster fifty hackney coaches, for each of which no more than twelve horses were to be kept. In 1652 their number had increased to two hundred; in 1654 there were three hundred, for which six hundred horses were employed; in 1694 they were limited to seven hundred; and in 1715 to eight hundred; afterwards the number was extended to one thousand, and now there are eleven hundred.

Mail coaches were first established about the year 1783, on the suggestion of Mr. John Palmer of Bath. They

travel the longest journeys at the average rate of seven miles an hour, and afford the most rapid means of public conveyance known in any part of the world.

The number of private coaches kept in London is about ten thousand, of which nearly two thousand may often be seen at one time in Hyde Park.

DECEMBER THE EIGHTH.

The City of Babylon.

NINUS being possessed with a rage of conquest, and having subdued many nations, suspended his warlike enterprises to enlarge the city of Nineveh, which had been founded by his father. This work being completed, Ninus resumed his arms at the head of several hundred thousand fighting men; and Semiramis, who was the wife of one of his officers, distinguished herself by her heroic exploits. The king married her, and left her his crown; and this ambitious princess, to immortalise her name, built in a very few years, the city of Babylon. In extent it far exceeded Nineveh, and its walls were of sufficient thickness to allow six chariots to run abreast upon them.

On each side of the square, formed by these walls, were twenty-five gates, that is a hundred gates in all. These gates were made of solid brass. Hence it is, that when, according to the Holy Scripture, God promised to Cyrus the conquest of Babylon, he tells him, *that he would break in pieces before him the gates of brass.*

* A branch of the river Euphrates ran through the city, over which was thrown a magnificent bridge. At the ends of the bridge were two palaces, which had a communication with each other by means of a vault built under the channel of the river.

The hanging gardens of this city, so celebrated among the Greeks, contained a square of four hundred feet on every side. The ascent was by stairs ten feet wide; the pile was supported by vast arches raised upon other arches, and strengthened by a wall twenty-two feet thick. The whole was covered with thick sheets of lead, upon which was laid the mould or earth of the garden. This mould was so deep, that the largest trees might take root in it.

In the upper terrace of the garden was an engine, by which water was drawn up from the river to water the garden with. In the spaces between the several arches upon which this curious structure rested, were large and

magnificent apartments, which were very light, and which commanded a beautiful prospect.

Among the other great works of Babylon was the temple of Belus, built for the worship of Belus or Baal. The riches of this temple in statues, tables, cups, and other sacred vessels, all of massy gold, were immense. Among other images was one of solid gold, forty feet high, which weighed a thousand talents.

This amazing fabric stood till the time of the Persian king, Xerxes, who demolished it, having first plundered it of all its riches. Alexander, on his return to Babylon from his Indian expedition, intended to rebuild and beautify it, but his sudden and premature death put an end to the undertaking.

The precise spot on which this magnificent city stood was till lately unknown. A vast heap of ruins has been discovered by some modern travellers on the banks of the Euphrates, and this heap appears to be the remains of Babylon.

DECEMBER THE NINTH.

The different Books of the Bible. (A Sunday Lesson.)

THE first book, GENESIS, contains the most grand, and, to us, the most interesting events that ever happened in the universe:—The creation of the world, and of man:—The deplorable fall of man, from his first state of excellence and bliss, to the distressed condition in which we see all his descendants continue:—The sentence of death pronounced on Adam, and on all his race—with the reviving promise of that deliverance which has since been wrought for us by our blessed Saviour:—The account of the early state of the world:—Of the universal deluge:—The division of mankind into different nations and languages:—The story of Abraham, the founder of the Jewish people, whose unshaken faith and obedience, under the severest trial human nature could sustain, obtained such favour in the sight of God, that he vouchsafed to style him his friend, and promised to make of his posterity a great nation; and that in his seed—that is, in one of his descendants—all the kingdoms of the earth should be blessed: this, you will easily see, refers to the Messiah, who was to be the blessing and deliverance of all nations. The story of Abraham's proceeding to sacrifice his only son at the command of God, is affecting in the highest

degree, and sets forth a pattern of unlimited resignation, that every one ought to imitate, in those trials of obedience under temptation, or of acquiescence under afflicting dispensations, which fall to their lot.

This book proceeds with the history of Isaac, which becomes very interesting to us, from the touching scene I have mentioned; and still more so, if we consider him as the type of our Saviour. It recounts his marriage with Rebecca; the birth and history of his two sons, Jacob, the father of the twelve tribes, and Esau, the father of the Edomites or Idumcans; the exquisitely affecting story of Joseph and his brethren; and of his transplanting the Israelites into Egypt, who there multiplied to a great nation.

In **EXODUS**, you read of a series of wonders, wrought by the Almighty, to rescue the oppressed Israelites from the cruel tyranny of the Egyptians, who having first received them as guests, by degrees reduced them to a state of slavery. By the most peculiar mercies and exertions in their favour, God prepared his chosen people to receive, with reverent and obedient hearts, the solemn restitution of those primitive laws, which probably he had revealed to Adam and his immediate descendants, or which, at least, he had made known by the dictates of conscience, but which time, and the degeneracy of mankind, had much obscured. This important revelation was made to them in the wilderness of Sinai: there, assembled before the burning mountain, surrounded "with blackness, and darkness, and tempest," they heard the awful voice of God pronounce the eternal law, impressing it on their hearts with circumstances of terror, but without those encouragements, and those excellent promises, which were afterwards offered to mankind by Jesus Christ.

To those moral precepts which are of perpetual and universal obligations, were superadded, by the ministration of Moses, many peculiar institutions, wisely adapted to different ends.

The next book is **LEVITICUS**, which contains little besides the laws for the peculiar ritual observance of the Jews, and therefore affords no great instruction to us now; you may pass it over entirely; and, for the same reason, you may omit the first eight chapters of Numbers. The rest of Numbers is chiefly a continuation of the history, with some ritual laws.

In **DEUTERONOMY**, Moses made a recapitulation of the foregoing history, with zealous exhortations to the people.

faithfully to worship and obey that God who had worked such amazing wonders for them: he promises them the noblest temporal blessings, if they prove obedient, and adds the most awful and striking denunciations against them, if they rebel or forsake the true God.

DECEMBER THE TENTH.

The Peak of Teneriffe.

TENERIFFE, one of the Canary Islands, is famous for its lofty mountain called the Peak, which rises like a sugar-loaf in the middle of the island, and may be seen at sea, in clear weather, at a hundred and twenty miles' distance. — Some authors make the side of the mountain fifteen miles, and others three or four times that number; computing, perhaps, the winding ascent. Its perpendicular height above the level of the sea is about three miles.

The Peak of Teneriffe is undoubtedly one of the highest mountains in the world; being little short of Mount Blanc, the highest of the Alps. It is true that Chimborazo, in Peru, the highest mountain in the world, is nearly a mile and a half higher; yet this extraordinary elevation is not so perceptible, because, like most other mountains, it stands among others of kindred height: but Teneriffe stands by itself in the middle of the ocean, and loses nothing of its wonderful elevation to the imagination of the spectator.

Yet extraordinary as is the height of this mountain, it subtracts no more from the rotundity of the earth, than do the slight inequalities on the surface of an orange, from its roundness. The height of Teneriffe is three miles: the diameter of the earth is 8000 miles, so that the Peak of Teneriffe is only the 2666th part of the earth's diameter, and probably the inequalities on the rind of an orange are equal to the 500th part of the diameter of that fruit.

When certain travellers arrived, on the second day of their journey, near the summit of this mountain, they found a strong wind, and a continual breathing of a hot sulphurous vapour, which even scorched their faces. On the top there was a large basin, or pit, shaped like an inverted cone, which was of considerable depth, and about a musket-shot over. The inside of this cavity or caldron, is covered with loose stones, mixed with sand and sulphur, from whence issued a hot suffocating steam; and the footing being bad, they did not descend to the bottom of it.

The brim of this pit, on which they stood, was not above a yard broad; and from hence they could clearly see the grand Canary, Palmo, Gomero, and even Ferro, which is sixty miles distant. As soon as the sun appeared, the shadow of the Peak seemed to cover not only this and the great Canary island, but even the sea to the very horizon. They further relate, that there was much snow and ice about two-thirds of the way up, but at the top there was none at all; and they met with no trees or shrubs in their passage but pines, and a bushy plant like broom.

DECEMBER THE ELEVENTH.

On Colours.

COLOUR is a property arising out of the various impressions which different particles of light make on the nerves of the eye. This impression is supposed to be varied by the size (or momentum) of the several rays, so that colour is conceived to arise from the various sizes of the rays of light.

A ray of solar light passing into a dark room through a hole in the shutter, and falling upon a glass prism placed to receive it, becomes divided into seven different rays, each of which bears its own colour. The oblong image which the refraction of the glass produces, affords seven coloured stripes, distributed in regular order. The first, from the upper part of the image, is red; the second, orange; the third, yellow; the fourth, green; the fifth, blue; the sixth, indigo; and the seventh, violet. These stripes pass from one into another, by gradations or shades.

The rays which bear the highest colours (as the red, orange, and yellow) are those that are the least bent or refracted in their passage through the prism, and are thence supposed to be the largest rays, or those moving with the greatest force. If one of these separated rays is made to pass through other prisms, it will afford no new colour but will constantly retain its primitive one.

If a glass lens be presented to the seven rays, divided by the prism, they will be re-united into a single ray, which will exhibit a round image of shining white. Hence all the colours united produce white. If only five or six of these rays be taken in by the lens, it will produce but a dusky white. Two rays only re-united by this means,

afford a colour that partakes of both. A stream of white or natural light, therefore, is an union of seven kinds of rays, the division of which produces seven principal and immutable colours, and their re-union forms white. The absence of all colour, or the negation of light, is black or darkness.

It is considered by philosophers, that when a mixed or original ray of light falls on any object, part of the rays are absorbed and part reflected. On the colour of the reflected rays depends that of the object seen, so that in fact we only see objects by means of the modification of the rays of light which are reflected from them. On the peculiar structure of their surface depends their absorption of certain colorific rays, and their reflection of the others; so that as all bodies vary in the construction of the particles or laminæ which compose their surface, they vary in every possible degree of colour.

The rainbow is one of the most beautiful phenomena, yet at the same time one of the most simple construction, in nature. The Sun shines on drops of rain, and the light which enters those drops is broken or divided into various colours, on the principle of the lens above described; and is afterwards refracted and reflected out of the drops all round (in a certain uniform relation to the position of the spectator) so as to produce that regular succession of prismatic colours, which so delights all, and which so much astonishes those who do not understand the cause.

GREGORY.

DECEMBER THE TWELFTH.

On Clouds and Rain.

A CLOUD is a collection of vapour, suspended in the atmosphere. In other words, it is a congeries of watery particles raised from the waters, or watery parts of the earth, by the solar or electrical fire. These watery particles, in their first ascent, are too minute, and too much separated by their mutual repulsion, to be perceived; but as they mount higher and higher, meeting with a greater degree of cold, losing their electricity, or by some process employed by Nature for this purpose, they are in a certain degree, condensed, and rendered opaque, by the re-union of their parts, so as to reflect and absorb light, and become visible as clouds.

The lowest part of the air being pressed by the weight

of the upper against the surface of the water, and continually rubbed upon it by its motion, attracts and dissolves those particles with which it is in contact, and separates them from the rest of the water. And since the cause of solution is the stronger attraction of the particles of water towards the air than towards each other, those that are already dissolved and taken up will be raised still higher, by the attraction of the dry air, which lies over them, and thus will diffuse themselves, rising gradually higher and higher, thereby leaving the lower air not so much saturated, but that it will still dissolve and take up fresh particles of water; which process is greatly promoted by the motion of the wind.

When the vapours are thus raised into the higher and colder parts of the atmosphere, some of them will coalesce into small particles, which slightly attracting each other, and being intermixed with air, will form *clouds*; and these clouds will float at different heights, according to the quantity of vapour borne up, and to the degree of heat in the upper part of the atmosphere. The clouds, therefore, are generally higher in summer than in winter; in the former season they are from one mile to three miles high, and in the latter from a quarter of a mile to a mile.

When the clouds are much increased by a continual addition of vapours, and their particles are driven close together by the force of the winds, they will run into drops heavy enough to fall down in *rain*. If the clouds are frozen before their particles are gathered into drops, small pieces of them being condensed, and made heavier by the cold, they fall down in flakes of *snow*. If the particles are formed into drops before they are frozen, they become *hailstones*. When the air is replete with vapours, and a cold breeze springs up which checks the solution of them in the air, clouds are formed in the lower parts of the atmosphere, and these compose a *mist* or *fog*: this usually happens in a cold morning; but the mist is dispersed when the sun has warmed the air, and made it capable of dissolving the watery particles of which the mist is composed.

Southerly winds generally bring rain, because, being commonly warm, and replete with aqueous vapours, they are cooled by passing into a colder climate; and therefore part with some of them, and suffer them to precipitate in rain: northerly winds, on the contrary, being cold, and acquiring heat by coming into a warm climate, take up or

dissolve more vapour than they before contained; and therefore are dry and parching, and usually attended with fair weather.

GREGORY.

DECEMBER THE THIRTEENTH.

The English, Oriental, Latin, and Greek Languages.

WE Britons have been remarkable borrowers, as our multiform language may sufficiently show. Our terms in polite literature prove that this came from Greece: our terms in music and painting, that these came from Italy: our phrases in cookery and war, that we learnt these from the French; and our phrases in navigation, that we were taught by the Flemings and Low Dutch. These many and very different sources of our language may be the cause why it is so deficient in regularity and analogy.— Yet we have this advantage to compensate the defect, that what we want in elegance we gain in copiousness, in which last respect few languages will be found superior to our own.

Let us pass from ourselves to the nations of the East. The eastern world, from the earliest days, has been at all times the seat of arbitrary monarchy: on its natives, liberty never shed its genial influence. If at any time civil discord arose among them, the contest was never about the form of their government, it was all from the poor motive of who should be their master; whether a Cyrus or an Artaxerxes, a Mahomet or a Mustapha.

Such was their condition; and what was the consequence?— Their ideas became consonant to their servile state, and their words became consonant to their servile ideas. The great distinction for ever in their sight, was that of tyrant and slave; the most unnatural one conceivable, and the most susceptible of pomp and empty exaggeration. Hence they talked of kings as gods; and of themselves as the meanest and most abject reptiles. Nothing was either great or little in moderation, but every sentiment was heightened by incredible hyperbole. Thus, though they sometimes ascended into the great and magnificent, they as frequently degenerated into bombast.

Wars and commotions, some foreign, some domestic, for seven hundred years wholly engrossed the thoughts of the Romans. Hence their language became, like their ideas, copious in all terms expressive of things political, and well

adapted to the purposes both of history and popular eloquence.

The Grecian commonwealths, while they maintained their liberty, were the most heroic confederacy that ever existed. They were the politest, the bravest, and the wisest of men. In the short space of little more than a century they became such statesmen, warriors, orators, historians, physicians, poets, critics, painters, sculptors, architects, and philosophers, that one can hardly help considering that golden period, as a providential event in honour of human nature, to show to what perfection our species might ascend.

And the language of these Greeks was truly like themselves; it was conformable to their transcendant and universal genius. Where matter so abounded, words followed of course, and those as exquisite in every kind, as were the ideas for which they stood. Hence it followed that there was not a subject to be found which could not with propriety be expressed in Greek. HARRIS.

DECEMBER THE FOURTEENTH.

On Electricity.

THE science of electricity investigates a very peculiar power or property in Nature. If you take any piece of glass, or a piece of sealing-wax, and rub it against your coat, or any woollen or silken substance, it will for some time after attract pieces of down, particles of dust, and other light bodies.

The power which this attracts or operates on such light bodies is called *electric*. It is susceptible of great variety and accumulation, and the investigation of its phenomena and effects constitutes the science of electricity. These phenomena are so various, so brilliant, and so remote from the appearances under which natural bodies are commonly presented to our observation, that, while they amuse the superficial, and excite the attention of the in-curious observer, they are adapted to exercise the faculties of the most intelligent philosopher.

The number and variety of the experiments which have been made in this branch of philosophy within our own times are astonishing; and the scarcity of observations made in the preceding ages, and even by our immediate

predecessors, on a subject which has proved so fruitful in our hands, is equally surprising.

The phenomena of electricity, galvanism, &c. consist in separations or mechanical decompositions of the component gaseous atoms of plates of electrics, connected and condensed on their opposed surfaces by surfaces of non-electrics; the re-union of which separated strata through a single point of conduit produces intense phenomena of atomic motion. Thus, glass is coated by tin-foil, air by metal conductors, the atmosphere by clouds and earth, and acids in galvanism by metallic plates; and the electric or galvanic power is within the intervening electrics, or on their surfaces.

Loose light bodies placed on the surface of an electrified stratum of coated air, present nearer surfaces to the oppositely affected surface; and the bodies being light, are patients of the force exerted within the stratum to restore the disturbed equilibrium of its surfaces, and therefore, by the energy exerted on their surfaces, they are alternately wafted between the affected surfaces of the stratum, creating phenomena which, in the language of the mystical philosophy, are called attraction and repulsion. The power of all affected strata is inversely as the least distance at which the equilibrium of the surfaces will not be restored; and the galvanic series is merely a mechanical means of accumulating or accelerating an original excitement.

PHILLIPS.

DECEMBER THE FIFTEENTH.

Of Thunder and Lightning.

THE cause of thunder is the same with that which produces the phenomena of electricity. Thunder is a grander species of electricity, excited naturally, unlike the feeble efforts of human art.

The cloud which produces thunder and lightning may be considered as a great electrified body; or, in other words, as a coating of a plate of air. If a cloud of this kind meets with another which is not electrified, or is less so than itself, the electric power flies off towards this cloud; and hence proceed *flashes* of lightning, and the *reports* of thunder.

Thunder-storms generally happen when there is little or no wind; and their first appearance is marked by one

or more dense clouds, increasing very fast in size, the lower surface black, and nearly level, but the upper arched. Many of these clouds seem frequently piled one upon another, all arched in the same manner; but they keep continually uniting, swelling, and extending their arches.

At the time of the rising of this cloud, the atmosphere is generally full of a great number of separate clouds, motionless, and of odd and whimsical shapes. All these, upon the appearance of a thunder-cloud, draw towards it, and become more uniform in their shapes as they approach; till, coming very near the thunder-cloud, their limbs mutually stretch towards one another, they immediately coalesce, and together make one great and dark mass.

While the thunder-cloud is swelling, and extending its branches over a large tract of country, the lightning of electricity is seen to dart from one part of it to another, and often to illuminate its whole mass. When the cloud has acquired a sufficient extent, the lightning strikes, between the cloud and the earth, in two opposite places, perhaps many miles distant, the path of the lightning lying through the whole body of the cloud and its branches.

In this grand operation the clouds seem to serve as conductors to convey the electric fluid from those parts of the earth which are overloaded with it, to those which are exhausted of it.

As the electric power will always restore its equilibrium along metallic bodies, it is obvious that if metallic conductors could be raised to the height of the clouds, all the electric fire contained in a cloud might be discharged or drawn off, and consequently the phenomenon of thunder and lightning be prevented. On this principle small pointed conductors have been affixed to buildings; but as these are generally too low to discharge a thunder-cloud, and not large enough to turn aside a stroke of lightning, security is attained more effectually by leaden or copper pipes communicating with the ground from the roof of the house.

In a thunder-storm it is well to prefer the middle of the room, and to avoid sitting near large metallic bodies. A bed removed from the wall is perfectly secure. In the open air, trees ought to be avoided, and low situations preferred to high ones.

GREGORY

DECEMBER THE SIXTEENTH.

The different Books of the Bible. (A Sunday Lesson.)

THE book of JOSHUA contains the conquests of the Israelites over the seven nations, and their establishment in the promised land. The book of JUDGES, in which you will find the affecting stories of Samson and of Jephtha, carries on the history from the death of Joshua, about two hundred and fifty years.

The history then proceeds regularly through the two books of SAMUEL, and those of KINGS: nothing can be more interesting and entertaining than the reigns of Saul, David, and Solomon: but, after the death of Solomon, when ten tribes revolted from his son Rehoboam, and became a separate kingdom, you will find some difficulty in understanding distinctly the histories of the two kingdoms of Israel and Judah, which are blended together, and, by the likeness of the names and other particulars, will be apt to confound your mind, without great attention to the different threads thus carried on together. The Second Book of Kings concludes with the Babylonish captivity, 588 years before Christ — till which time, the kingdom of Judea had descended uninterruptedly in the line of David.

The first book of CHRONICLES begins with a genealogy from Adam, through all the tribes of Israel and Judah; and the remainder is the same history, which is contained in the books of Kings, with little or no variation, till the separation of the ten tribes: from that period, it proceeds with the history of the kingdom of Judah alone, and gives, therefore, a more regular and clear account of the affairs of Judah than the book of Kings. The Second of Chronicles ends, like the Second of Kings, with the Babylonish captivity. You must pursue the history in the book of EZRA, which gives an account of the return of some of the Jews, on the edict of Cyrus, and of the rebuilding the Lord's temple. NEHEMIAH carries on the history, for about twelve years, when he himself was governor of Jerusalem, with authority to rebuild the walls, &c. The story of ESTHER is prior in time to that of Ezra and Nehemiah. This is the last of the canonical books that is properly historical; and I would therefore advise, that you pass over what follows, till you have continued the history through the apocryphal books. — The history of JOB is probably very ancient, though that is a

point upon which learned men have differed : it is well worth studying, for the extreme beauty of the poetry, and for the noble and sublime devotion it contains.

' Next follow the **PSALMS**, with which you cannot be too conversant. If you have any taste, either for poetry or devotion, they will be your delight, and will afford you a continual feast. The Bible translation is better than that used in the Common Prayer Book ; and will often give you the sense, when the other is obscure.

The **PROVERBS** and **ECCLESIASTES** are rich stores of wisdom ; from which I wish you to adopt such maxims as may be of infinite use, both to your temporal and eternal interest.

Next follow the **PROPHECIES**, which highly deserve the greatest attention. One of the main proofs of our religion rests on the testimony of the prophecies ; and they are very frequently quoted, and referred to, in the New Testament.

Though I have spoken of these books, in the order in which they stand, they are not to be read in that order ; but the thread of the history is to be pursued, from Nehemiah to the first book of **MACCABEES**, in the Apocrypha. The First of Maccabees carries on the story, till within 195 years of our Lord's circumcision : the second book is the same narrative, written by a different hand, and does not bring the history so forward as the first.

The other books of the Apocrypha, though not admitted as of sacred authority, have many things well worth your attention : particularly the admirable book called **ECCLESIASTICUS**, and the **BOOK OF WISDOM**. CHAPONE.

DECEMBER THE SEVENTEENTH.

Julius Cæsar. *

CÆSAR was endowed with every great and noble quality that could exalt human nature, and give a man the ascendant in society ; formed to excel in peace, as well as war ; provident in council ; fearless in action ; and executing what he had resolved with an amazing celerity : generous beyond measure to his friends : placable to his

* He was born in the year 100, before Christ ; took the title of emperor in 45 ; and was killed in the senate-house in the following year, aged 56.

enemies ; and for talents, learning, and eloquence, scarcely inferior to any man.

His orations were admired for two qualities which are seldom found together, strength and elegance. Cicero ranks him among the greatest orators that Rome ever bred ; and Quintilian says, that he spoke with the same force with which he fought ; and, if he had devoted himself to the bar, would have been the only man capable of rivalling Cicero. Nor was he a master only of the politer arts, but conversant also with the most abstruse and critical parts of learning.

He was a most liberal patron of wit and learning, wherever they were found : and, out of his love of these talents, would readily pardon those who had employed them against himself ; rightly judging, that by making such men his friends, he should draw praises from the same fountain from which he had been aspersed. His chief passions were ambition, and love of pleasure ; which he indulged in their turns to the greatest excess ; yet the first was always predominant ; to which he could easily sacrifice all the charms of the second, and draw pleasure from even toils and dangers, when they ministered to his glory.

He had frequently in his mouth a verse of Euripides, which expressed the image of his soul ; that if right and justice were ever to be violated, they were to be violated for the sake of reigning. This was the chief end and purpose of his life ; the scheme that he had formed from his early youth ; so that, as Cato truly declared of him, he came with sobriety and meditation to the subversion of the republic.

His great abilities would necessarily have made him one of the first citizens of Rome ; but, disdaining the condition of a subject, he could never rest till he made himself a monarch. In acting this last part, his usual prudence seemed to fail him : as if the height to which he was mounted had turned his head, and made him giddy : for, by a vain ostentation of his power he destroyed the stability of it ; and as men shorten life by living too fast, so by an intemperance of reigning he brought his reign to a violent end.

MIDDLETON.

DECEMBER THE EIGHTEENTH.

Of the Eclipses of the Sun and Moon.

OF all the phenomena of the heavens, there are none which engage the attention of mankind more than eclipses of the sun and moon; and to those who are unacquainted with the principles, nothing can appear more extraordinary than the accuracy, to a second of time, with which they are predicted.

In the early ages of antiquity, before religion and science had enlightened the world, appearances of this kind were generally regarded as alarming deviations from the regular phenomena of nature; and few, even among philosophers themselves, were able to account for them. At length, when men began to apply themselves to observations, and the celestial motions were better understood, these phenomena were found to depend upon regular causes, and to admit of a natural and easy solution.

All opaque or dark bodies, when they are opposed to the light of the sun, or that of any luminous body, occasion a shadow to appear behind them in an opposite direction to the rays of light; or in others they occasion an obstruction of the rays of light, and the negation causes darkness; or, in common language, they cast a shadow.

•As the earth is an immense opaque sphere, the shadow of it spreads through a large space, and extends to a great distance. It is plain that the moon, in passing through this dark space or shadow, must at that time be deprived of her borrowed light, or suffer what is called an eclipse.

And as the sun is larger than the earth, the earth's shadow is of course conical, and terminates in a point.

The figure of the moon's shadow is also that of a cone, for the same reason; and when it falls upon any part of the earth, in passing betwixt the earth and the sun, the inhabitants of that part will be involved in darkness, and the sun will seem to them to be eclipsed as long as the shadow of the intervening moon covers them.

Yet, as the moon is much less than the earth, and its shadow can extend over but a small portion of the earth's surface, there will be total darkness only in that space of the earth where the centre of the shadow falls; and in the circumjacent places the inhabitants will see a greater or

less part of the sun's disk obscured, according as they are nearer to, or further from, the centre. Eclipses of the sun are always confined, therefore, to particular places on the earth; but those of the moon may be observed from every part of the earth where she is above the horizon, or wherever she is to be seen at the time when the eclipse happens. Except in total eclipses of the sun, the moon's shadow on the earth is seldom found to be above a hundred and fifty miles broad.

In a word, eclipses of the sun are occasioned by the shadow of the intervening new moon falling on the earth. and eclipses of the moon are occasioned by the shadow of the earth falling on the full moon, the earth at the full moon being always directly between the sun and the moon.

GREGORY.

DECEMBER THE NINETEENTH.

Beauty of the Morning.

It was early in a summer morning, when the air was cool, the earth moist, the whole face of the creation fresh and gay, that I lately walked in a beautiful flower-garden, and at once regaled the sense and indulged the fancy. The noisy world was scarce awake: business had not quite shaken off his sound sleep, and riot had but just reclined his giddy head. All was serene, all was still. Every thing tended to inspire tranquillity of mind, and invite to serious thought; only the watchful lark had left her nest, and was mounting on high to salute the opening day. Elevated in the air, she seemed to call the laborious husbandman to his toil, and all her fellow-songsters to their notes. Earliest of birds, (said I,) companion of the dawn, may I always rise at thy voice! rise to offer the matin-song, and adore that beneficent Being, who maketh the outgoing of the morning and evening to rejoice. How charming is it to rove abroad at this sweet hour of prime! to enjoy the calm of nature, to tread the dewy lawns, and taste the unruffled freshness of the air!

Sweet is the breath of morn, her rising sweet,
With charm of earliest birds!

What a pleasure do the sons of sloth lose! Little is the sluggard sensible how delicious an entertainment he forgoes for the poorest of all animal gratifications. Shall

man be lost in luxurious ease? Shall man waste those precious hours in idle slumbers, while the vigorous sun is up, and going on his Maker's errand, and all the feathered choir are hymning the Creator, and paying their homage in harmony? No: let him heighten the melody of the tuneful tribes by adding the rational strains of devotion. Let him improve the fragrant oblations of nature, by mingling with the rising odours the refined breath of praise. It is natural for man to look upward, to throw his first glance upon the objects that are above him.

Straight towards heav'n my wandering eyes I turned,
And gaz'd awhile the ample sky.

Prodigious theatre! where lightnings dart their fire, and thunders utter their voice; where tempests spend their rage, and worlds unnumber'd roll at large. — "Here hath God set a tabernacle for the sun." Behold him coming forth from the chambers of the east. See the clouds, like floating curtains, are thrown back at his approach. With what refulgent majesty does he walk abroad! How transcendently bright is his countenance, shedding day and inexhaustible light through the universe. — Methinks I discern a thousand admirable properties in the sun. It is certainly the best material emblem of the Creator. There is more of God in its lustre, energy, and usefulness, than in any other visible being. To worship it as a deity was the most excusable of all the heathen idolatries.

HERVEY.

DECEMBER THE TWENTIETH.

Origin of Commerce, and the Use of Money.

THE few wants of men in the first state of society are supplied by barter in its rudest form. In barter the rational consideration is, what is wanted by the one, and what can be spared by the other. But savages are not always so clear-sighted. A savage who wants a knife will give for it any thing that is less useful to him at the time, without considering his future wants. But mankind improve by degrees, attending to what is wanted on the one side, and to what can be spared on the other.

Barter, in its original form, proved miserably deficient

when men and their wants multiplied. That sort of commerce could not be carried on at a distance; and even among neighbours, it does not always happen, that the one can spare what the other wants; it was necessary; therefore, that some commodity should be found in general estimation, that would be gladly accepted in exchange for every other, and which should be neither bulky, expensive in keeping, nor consumable by time. Gold and silver are metals that possess these properties in an eminent degree; and are also divisible into small parts, convenient to be given for goods of small value.

Gold and silver, when first introduced into commerce, were probably bartered like other commodities, by bulk merely: but shortly, instead of being given loosely by bulk, every portion was weighed in scales, but weight was no security against mixing gold and silver with base metals. To prevent that fraud, pieces of gold and silver are impressed with a public stamp, vouching both the purity and the quantity; and such pieces are termed *coins*.

This was an improvement in commerce, and at first, probably, deemed complete. It was not foreseen that these metals wear by much handling in the course of circulation, and consequently, that in time the public stamp is reduced to be a voucher of the purity only, not of the quantity. This embarrassment is remedied by the use of paper-money; and paper-money is attended with another advantage, that of preventing the loss of much gold and silver by wearing.

When gold or silver in bullion is exchanged with other commodities, such commerce passes under the common name of *barter* or *permutation*: when current coin is exchanged, such commerce is termed the *buying* and *selling*; and the money exchanged is termed the *price of the goods*.

The Phœnicians were the earliest people who are recorded to have devoted themselves to commerce. It seems they performed long voyages, and established colonies in remote countries, like the moderns. The Greeks and Romans were not insensible of the value of commerce, and they pursued it at different periods with eagerness and success.

The Venetians, from the year 900 to 1500, enjoyed a monopoly of the produce of the East, and thereby became a wealthy and powerful people. The Genoese proved their rivals; but certain free towns of Germany, called

Hanse Towns, afterwards disputed with the Italians the palm of commerce.

The Portuguese, on discovering a new route to India by the Cape of Good Hope, became for a time a considerable commercial people; but the Dutch drove them from their India possessions, and for a century carried on half the trade of the world.

Finally, the English have taken the lead of all other nations; and by means of their invincible fleets, their free constitution, their domestic agriculture and manufactures, and their valuable colonies in every sea, they have nearly engrossed the commerce of the world to themselves.

GREGORY.

DECEMBER THE TWENTY-FIRST.

On the English Nation.

Britannia, hail! hail, happy isle,
Where joys inhabit, pleasures smile:
Great nurse of heroes, seat of charms,
Supreme in arts, and first in arms.
Trade, arts, and science, flourish here,
And bless each fair revolving year;
Gay-smiling plenty reigns around,
And golden harvests load the ground.

IN all the sciences, and almost in every art, the English have attained to as much eminence as any people have acquired, and their general treatment of foreigners, both at home and abroad, proves that they are perfectly sensible of their superiority. By the honours which they bestow on their distinguished countrymen, they afford to other nations a convincing proof how proud they are of their merits.

In no country are the personal deserts of a man considered with such a total disregard to his birth, rank, or other adventitious circumstances. — Is he a nobleman? is the first question asked in Germany concerning a stranger; in Holland, Is he rich? but in England, What is his character?

In England, the burial-place of the monarchs is also the sepulchre of the men of genius. The remains of an actress, which in France are refused Christian burial, are in England deposited beside the chiefs of the state.

In this nursery of great men, Newton, while living, enjoyed extraordinary honours, and, after his decease

was interred with royal pomp among monarchs and men of learning. The honours thus generally bestowed in England on talents, have in every age induced the first nobility of the kingdom, many of whom have attained to rank through commerce, to entwine, as far as they are able, the palm of science and literary patronage around their coronets.

And it is only because they are more free than other nations, that the English are more enlightened. With this spirit of liberty, and with the advantages which result from their free constitution, they ardently apply to the study of the sciences, reflect profoundly on the interests of nations, and are always engaged in the consideration of important subjects, and in the execution of great designs. Long may the inhabitants of the British islands justly appreciate their excellent constitution, under which they enjoy not only tranquillity, but a protection and security for their persons and property, unknown to every other part of the world! ZIMMERMAN.

DECEMBER THE TWENTY-SECOND.

Account of the principal Heathen Gods.

THE most ancient of the gods were Cháos *, and his son Er'ebus: or confusion, and darkness. — Sáturñ, one of their descendants, is the same as Time: his reign is called the Golden Age; and it is said, that the earth then produced corn and fruits without labour, and justice prevailed among all mankind. — Saturn was deposed by his son Júpiter, called also Jove; who then divided his father's power between himself and his two brothers, Néptune and Plúto. Jupiter was to reign over heaven; and he was said to hold his court, or council of the gods, on the top of Olýmpus, a mountain in Théssaly. He is called by the ancient poets, the king of gods and men; and the eagle is represented as being the bearer of his thunderbolts. — Néptune, the god of the sea, is represented with a trident, or fork with three teeth, in his hand instead of a sceptre. He was drawn in his chariot by sea-horses, with his son Tríton blowing a trumpet made of a shell, and dolphins playing round him. — The dominions of Plúto, the god of the infernal regions, were divided into two parts, called Tártarus and Elýsium.

* These names are accented as they are to be pronounced.

Tartarus was the place where the souls of the wicked were punished, and Elysium was the scene of perpetual happiness allotted to the good. The passage from the earth to these regions was across the river A'cheron, over which the departed spirits were conveyed by an old boatman named Cháron; and the further bank was also guarded by a dog with three heads, named Cérberus. There were two remarkable rivers of hell: one named Styx, which the gods used to swear by when they intended to make their oath very solemn; and another named Léthe, which caused whoever bathed in it to forget every thing that was past. — Mars, the son of Jupiter, was the god of war. — Apóllo, likewise the son of Jupiter, was the god of music, poetry, and medicine. He is also represented as driving the chariot of the sun, drawn by four horses abreast; or rather he is the sun itself. As a mark of affection, he intrusted this chariot one day to his son Phácton; who was killed by being thrown out of it, but not till after he had set a part of the earth on fire. Apollo is called also Phœbus, and Hypérion; and is represented as a beautiful young man, without a beard, and with graceful hair. — Mércury, a son of Jupiter, was the messenger of the gods, and is therefore represented with wings to his cap and his feet. He was said to be the inventor of letters, and hence he is the god of eloquence; and was the god of trade, and thence also of thieves. He was called also Hérmes; and is represented as carrying a wand, called caduceus, with two serpents twisting round it. — Vúlcan, the god of fire and of smiths, was the artificer of heaven; and made the thunderbolts of Jupiter, and the armour and palaces of the gods. He once offended Jupiter, who kicked him out of heaven; and falling on the island of Lénnos, he broke his leg, and was lame ever after. It is said that one of his principal forges was within mount Etna. He is called also Múlciber.

The foregoing are the principal gods, but there were many of a second or still lower order. Thus Bácehus was the god of wine, and was crowned with leaves of the vine and ivy. E'olus was the god of the winds: the north wind was called Bóreas, the south wind Aúster, the east wind Eúrus, and the west wind Zéphyrus. Mómus was the god of satire, and likewise of laughter and jokes. Plútus was the god of riches. Hýmen was the god of marriage: he is represented with a burning torch. Cupid was the god of love: he is represented as a beautiful child, but blind or hoodwinked; and carries a bow and arrow.

Jánuſ, a god with two faces, looking forward and backward, had a temple which was open in time of war, and ſhut in peace. Eſculápius was an inferior god of medicine, below Apollo: he is repreſented as accompanied by a ſerpent, which was thought the moſt long-lived of all animals. Pan was the god of ſhepherds: his lower parts have the figure of a goat's; and he is repreſented as having horns, and as carrying the muſical inſtrument now called Pan's pipes. There were other rural deities called Sátyrs, Fauns, and Sylvans: their figures were half-man and half-goat, and they dwelt chiefly in forests. Every river alſo was ſuppoſed to have its own god; who was drawn with a long beard, a crown of reeds, and leaning on an urn. There were likewiſe a great number of demi-gods, or half-gods; who were ſuppoſed to have a god for their father, and a woman for their mother: the principal one of theſe was Hercules; who was accounted the god of ſtrength, from his having performed ſome wonderful undertakings, called his Twelve Labours. He is repreſented leaning on a large club, and wearing a lion's ſkin. BALDWIN.

DECEMBER THE TWENTY-THIRD.

The different Books of the Bible. (A Sunday Leſſon.)

THOUGH the four Gospels are each of them a narration of the life, ſayings, and death of Chriſt, yet, as they are not exactly alike, but ſome circumſtances and ſayings omitted in one, are recorded in another, you muſt make yourſelf perfectly maſter of them all.

The Acts of the holy Apoſtles, endowed with the Holy Ghhoſt, and authoriſed by their Divine Maſter, come next in order to be read. Nothing can be more intereſting and edifying, than the hiſtory of their actions; of the piety, zeal, and courage, with which they preached the glad tidings of ſalvation: and of the various exertions of the wonderful powers conferred on them by the Holy Spirit, for the confirmation of their miſſion.

The character of St. Paul, and his miraculous converſion, demand your particular attention: moſt of the apoſtles were men of low birth and education; but St. Paul was a Roman citizen; that is, he poſſeſſed the privileges annexed to the freedom of the city of Rome, which was conſidered as an high diſtinction in thoſe countries, that had been conquered by the Romans. He was educated

amongst the most learned sect of the Jews, and by one of their principal doctors. He was a man of extraordinary eloquence, as appears not only in his writings, but in several speeches in his own defence, pronounced before governors and courts of justice, when he was called to account for the doctrines he taught. He seems to have been of an uncommon warm temper, and zealous in whatever religion he professed.

Next follow the epistles, which make a very important part of the New Testament ; and you cannot be too much employed in reading them. They contain the most excellent precepts and admonitions, and are of particular use in explaining more at large several doctrines of Christianity, which we could not so fully comprehend without them.

I will not enter into the several points discussed by St. Paul in his various epistles ; most of them too intricate for your understanding at present, and many of them beyond my abilities to state clearly. I will only again recommend to you, to read those passages frequently, which with so much fervour and energy excite you to the practice of the most exalted piety and benevolence.

The Epistle of St. James is entirely practical, and exceedingly fine ; you cannot study it too much. It seems particularly designed to guard Christians against misunderstanding some things in St. Paul's writings which have been fatally perverted to the encouragement of a dependence on faith alone, without good works.

The Epistles of St. Peter are also full of the best instructions and admonitions, concerning the relative duties of life ; amongst which are set forth the duties of women in general, and of wives in particular.

The first of St. John is written in a highly figurative style, which makes it in some parts hard to be understood : but the spirit of divine love which it so fervently expresses renders it highly edifying and delightful.

The book of Revelations contains a prophetic account of most of the great events relating to the Christian church, which were to happen from the time of the writer, St. John, to the end of the world. Many learned men have taken a great deal of pains to explain it ; and they have done this in many instances very successfully.

DECEMBER THE TWENTY-FOURTH.

Of Elocution and Oratory.

ELOCUTION may be regarded either as a science, or as an art. In the former signification it may be defined—the science by which the rules for the just delivery of eloquence are taught; in the latter—the vital manifestation of eloquence; or that happy combination and coincidence of vocal, enunciative, and gesticulative expression, by which oratorical excitement is superadded to the eloquence of thought and language.

In other words—Elocution is the art, or the act of so delivering our own thoughts and sentiments, or the thoughts and sentiments of others, as not only to convey to those around us (with precision, force, and harmony) the full purport and meaning of the words and sentences in which those thoughts are clothed; but, also to excite and impress upon their minds the feelings, the imaginations, and the passions by which those thoughts are dictated, or with which they should naturally be accompanied.

Elocution, therefore, in its more ample and liberal signification, is not confined to the mere exercise of the organs of speech. It embraces the whole theory and practice of the exterior demonstration of the inward workings of the mind.

To concentrate what has been said by an allegorical recapitulation—Eloquence may be considered as the soul, or animating principle, of discourse; and is dependent on intellectual energy and intellectual attainments. Elocution is the embodying form, or representative power; dependent on exterior accomplishment, and on the cultivation of the organs. Oratory is the complicated and vital existence resulting from the perfect harmony and combination of eloquence and elocution.

This vital existence, however, in its full perfection, is one of the choicest rarities of nature. The high and splendid accomplishments of oratory (even in the most favoured ages, and the most favoured countries) have been attained by few: and many are the ages, and many are the countries, in which those accomplishments have never once appeared. Generations have succeeded generations, and centuries have rolled after centuries, during which the intellectual desert has not exhibited even one solitary specimen of the stately growth and flourishing expansion of oratorical genius.

The rarity of this occurrence is, undoubtedly, in part,

to be accounted for from the difficulty of the attainment. The palm of oratorical perfection is only to be *grasped* — it is, in reality, only to be *desired* — by aspiring souls, and intellects of unusual energy. It requires a persevering toil which few would be contented to encounter; — a decisive intrepidity of character, and an untameableness of mental ambition, which few, very few, can be expected to possess. It requires also, conspicuous opportunities for cultivation and display, to which few can have the fortune to be born; and which fewer still will have the hardihood to endeavour to create.

THELWALL.

DECEMBER THE TWENTY-FIFTH.

The Founder of Christianity. (Christmas Day.)

NEVER was there on earth any other person of so extraordinary a character as the Founder of our religion. — In him we uniformly see a mildness, dignity, and composure, and a perfection of wisdom and of goodness, that plainly point him out as a superior being. But his superiority was all in his own divine mind. He had none of those outward advantages that have distinguished all other lawgivers. He had no influence in the state; he had no wealth; he aimed at no worldly power. He was the son of a carpenter's wife, and he was himself a carpenter — So poor were his reputed parents, that at the time of his birth his mother could obtain no better lodging than a stable; and so poor was he himself, that he often had no lodging at all.

That he had no advantages of education, we may infer from the surprise expressed by his neighbours on hearing him speak in the synagogue: — "Whence hath this man these things? What wisdom is this which is given him? Is not this the carpenter, the son of Mary? Are not his brethren and sisters with us?" This point, however, we need not insist on; as from no education, that his own or any other country could have afforded, was it possible for him to derive that supernatural wisdom and power, that sanctity of life, and that purity of doctrine, which so eminently distinguish him.

His first adherents were a few fishermen; for whom he was so far from making any provision, that, when he sent them out to preach repentance and heal diseases, they were, by his desire, furnished with nothing but one coat, a pair of sandals, and a staff. He went about, in great

humility and meekness, doing good, teaching wisdom, and glorifying God, for the space of about three years after the commencement of his ministry; and then, as he himself had foreseen and foretold, he was publicly crucified.

This is the great personage born on this day, who still gives law to the world. This is he who has been the author of virtue and happiness to millions and millions of the human race. And this is he whom the wisest and best men that ever lived have revered as a divine person, and gloried in as the deliverer and saviour of mankind.

BEATTIE.

DECEMBER THE TWENTY-SIXTH.

The Age of Chivalry.

BETWEEN the ages of Charlemagne and that of the crusades, a revolution took place among the Spaniards, Normans, and French, which gradually extended itself to the rest of Europe. The service of the infantry was degraded to the plebeians; the cavalry formed the strength of the armies; and the honourable name of *miles*, or soldier, was confined solely to the gentlemen, who served on horseback, and who were invested with the character of knight-hood.

The dukes and counts, who had usurped the rights of sovereignty, divided the provinces among their faithful barons; the barons distributed among their vassals the fiefs, or benefices, of their jurisdiction; and these military tenants (the peers of each other and of their lord) composed the noble or equestrian order, — which disdained to conceive the peasant or burgher as of the same species with themselves. The dignity of their birth was preserved by pure and equal alliances; their sons, alone, who could produce four quarters, or lines, of ancestry, without spot or reproach, might legally pretend to the honour of knight-hood; but a valiant plebeian was sometimes enriched, and ennobled by the sword, and became the father of a new race. A single knight could impart, according to his judgment, the character which he received; and the warlike sovereigns of Europe derived more glory from this personal distinction than from the lustre of their diadem.

This ceremony was, in its origin, simple and profane; the candidate, after some previous trial, was invested with his sword and spurs; and his cheek, or shoulder, was touched with a slight blow, as an emblem of the last af-

front which it was lawful for him to endure. But superstition mingled in every public and private action of life; in the holy wars it sanctified the profession of arms; and the order of chivalry was assimilated, in its rights and privileges, to the sacred order of priesthood. As the champion of God and the ladies, the knight devoted himself to truth; to maintain right; to protect distress; to practise courtesy; to despise the allurements of ease and safety; and to vindicate, in every perilous adventure, the honour of knighthood.

The benefits of this institution, to refine the temper of barbarians, and to infuse some principles of faith, justice, and humanity, were strongly felt, and have been often observed. The asperity of national prejudice was softened; and the community of religion and arms spread a similar colour, and generous emulation, over the face of Christendom. Abroad, in enterprise, and pilgrimage, — at home, in martial exercise, the warriors of every country were perpetually associated: and impartial taste must prefer a Gothic tournament to the Olympic games of classic antiquity. Instead of the naked spectacles, which corrupted the manners of the Greeks, and banished from the stadium the virgins and matrons, the pompous decoration of the lists was crowned with the presence of chaste and high-born beauty, from whose hands the conqueror received the prize of his dexterity and courage. GIBBON.

DECEMBER THE TWENTY-SEVENTH.

Account of the principal Heathen Goddesses.

JUNO was the wife of Jupiter, and was of course the queen of heaven. She is represented as drawn by peacocks in a chariot of gold. Her favourite messenger was Iris, the goddess of the rainbow. — Minerva, a daughter of Jupiter, was the goddess of wisdom and of war. She was represented in complete armour, bearing a shield (called ægis) with a head on it, so terrible, that every one who looked on it was turned into stone. She was likewise the patroness of spinning, needle-work, and embroidery. She was called also Pallas, and her principal emblem was the owl. — Diana was the twin-sister of Apollo; and as he drove the chariot of the sun, so she presided in that of the moon. She was the goddess of hunting; and is drawn as carrying a bow and arrows, with a half-moon as an ornament on her forehead, and attended by several nymphs

as her companions, and by her hounds : she was likewise the goddess of chastity. She is called also Phœbe ; and Cýnthia, from having been born on mount Cýnthus ; and she had a very famous temple at Ephesus, which is mentioned in the New Testament, in the 19th chapter of the Acts. — Vénus was the goddess of beauty and of love ; and the wife of Vulcan, and mother of Cupid : her chariot was drawn by doves, and the myrtle was sacred to her. She was said to have sprung from the sea, near the island of Cyth'era ; and her most celebrated temple was at the city of Páphos, in the island of Cýprus : hence she is called also Cytheréa ; and the Páphian, or the Cýprian, goddess. She was famous for her cestus, or girdle ; which had the power of giving to any female who wore it irresistible charms in the eyes of whomsoever she wished to please : but young women may still find the true girdle of Venus to be good-humour. — Vêsta was the goddess of the earth and of fire. In her temple at Rome, a perpetual fire was maintained, which was kindled from the rays of the sun, and was constantly watched by priestesses chosen from the most noble families ; who took a vow of chastity, and were buried alive if they broke it. They were called Vestal virgins, and had very great honours and privileges. — Céres was the goddess of corn and of harvests. — Cyb'ele was one of the most ancient of the goddesses, being the wife of Saturn ; and in some respects represents the Earth. She is displayed as crowned with towers, holding a key in her hand, and drawn in her chariot by lions. — Proserpine was the wife of Pluto, and of course the queen of the infernal regions. She was the daughter of Céres. — Amphitríte was the wife of Neptune. Her sister was Thétis, another sea-goddess ; and hence, when the sun sets, he is said to sink into Thetis's lap. — The foregoing are the principal goddesses.

Flóra was the goddess of flowers, and Pomóna was the goddess of fruits. Bellóna was an inferior goddess of war. Auróra was the goddess of the morning, or rather of day-break. Thémis, the sister of Saturn, was the goddess of righteousness and justice : her daughter Astréa also represents justice ; she is sometimes called the Virgin, and in this character has a place among the stars, being denoted by the constellation Virgo (or the virgin). Hygéia was the goddess of health. Hébe was the goddess of youth, and was cup-bearer to Jupiter. A'te was the goddess of mischief. — The Muses were nine virgin goddesses who presided over every kind of learning, and in that character attended on Apollo. They were sisters : the principal of

them were Clio, who was the muse of history; Thalia, of comedy; Melpom'ene of tragedy; Terpsic'hore, of dancing; and Uránia, of mathematics and astronomy. They are sometimes called merely the Nine, in reference to their number. Parnássus and Hélicon were two mountains sacred to Apollo and the Muses; at the feet of which flowed two streams, whose waters were supposed to communicate the inspiration of prophecy or of poetry. Peg'asus was a winged horse of the Muses. — The Graces were three sisters, likewise virgins. They were supposed to give its attractive charms to beauty of every kind, and so dispense the gift of pleasing. — The Furies were three sisters of a very different character: they were the most deformed and horrible of all the deities. Instead of hair, they had snakes hanging from their heads. They carried chains, and whips with lashes of iron or of scorpions in one hand, and lighted torches in the other. They were the bearers of the vengeance of heaven. — The Destinies or Fates were also three sisters, of whom one was represented as holding a distaff; another drawing from it a thread, signifying the life of man; and the third with a pair of shears, ready to cut the thread whenever she should choose. — The Dryads and Ham'adryads were rural goddesses, each having a single tree in her charge. The Náiads were goddesses presiding over springs, wells, and fountains; each, in the same manner, having one under her care. The Néreids were inferior goddesses of the sea.

BALDWIN.

DECEMBER THE TWENTY-EIGHTH.

Self-Learning and Books.

THE history of literature furnishes numerous instances of self-taught men; and some of the greatest scholars and philosophers have been of this description. The profound critic, Julius Scaliger, knew not the letters of the Greek alphabet till after he was forty years of age; and the great Erasmus was indebted more to his own application, than to the instruction of others, for his comprehensive stores of learning. In philosophy and science, these instances have been still more striking and numerous; the celebrated Pascal, when a child, by his own application alone, acquired a knowledge of the rudiments of geometry; and James Ferguson and Thomas Simpson became excellent instructors of others in mathematics, without having had any teachers themselves.

The defects of education may be certainly made up by

assiduous application, and by the use of proper means. It happens, however, that those who have the wish to improve their minds, feel a discouragement at the outset, from adopting an injudicious method; or by unfortunately making use of books composed for proficientes instead of beginners in learning. Others again who have a thirst for knowledge, put themselves to great expence in collecting many books, by reading which they obtain some information, it is true; but, from the want of order and selection, they attain no correct or clear knowledge of any one subject.

In general, the last work on any art or science is the best, and ought to be preferred, provided it is published by a bookseller of respectability, or written by a known and approved author. Nothing can be more absurd than to purchase or adopt an antiquated or obsolete treatise on any branch of knowledge, if a skilful author has produced a modern one on the same subject. He is certain at the least to have introduced what was known to his predecessors, and to have incorporated all the modern improvements and discoveries. It may, in fact, be assumed as a general proposition, that persons who indulge in the purchase of books of science at second-hand shops, will, during the greater part of their lives, be employed in unlearning the errors with which they have encumbered their minds. No money is so decidedly ~~thrown~~ away, as that which is expended on musty treatises at the second-hand book stalls, and no time is so unprofitably wasted, I might say, perniciously employed, as in the inbibing of their errors.

I could adduce innumerable instances of the succession of books on various subjects, sufficient to prove that the Royal Road to Knowledge is through the medium of modern works written by able authors. — Books, in a word, are like the knowledge they contain, progressive in value and perfection. Except geometry, theology, and morals, no other subjects of human enquiry have remained stationary; on the contrary, every fifty years has produced essential and important changes, which, if we would excel in wisdom, we should consult and adopt. COLLINS on *School Books*.

DECEMBER THE TWENTY-NINTH.

Character of the principal Nations of Europe.

In religion, the German is sceptical; the Englishman devout; the Frenchman zealous; the Italian ceremonious; the Spaniard a bigot.

In *keeping his word*, the German is faithful ; the Englishman safe ; the Frenchman giddy ; the Italian shuffling ; the Spaniard a cheat.

In *giving advice*, the German is slow ; the Englishman tearless ; the Frenchman precipitate ; the Italian nice ; the Spaniard circumspect.

In *external appearance*, the German is large ; the Englishman well made ; the Frenchman well looking ; the Italian of middle size ; the Spaniard awkward.

In *dress*, the German is shabby ; the Englishman costly ; the Frenchman fickle ; the Italian ragged ; the Spaniard decent.

In *manners*, the German is clownish ; the Englishman barbarous ; the Frenchman easy ; the Italian polite ; the Spaniard proud.

In *keeping a secret*, the German forgets what he has been told ; the Englishman conceals what he should divulge, and divulges what he should conceal ; the Frenchman tells every thing ; the Italian is close ; the Spaniard mysterious.

In *vanity*, the German boasts little ; the Englishman despises all other nations ; the Frenchman flatters everybody ; the Italian estimates cautiously ; the Spaniard is indifferent.

In *eating and drinking*, the German is a drunkard ; the Englishman gross and luscious ; the Frenchman delicate ; the Italian moderate ; the Spaniard penurious.

In *offending and doing good*, the German is inactive ; the Englishman does both without consideration ; the Italian is prompt in beneficence, but vindictive ; the Spaniard indifferent.

In *speaking*, the German and Frenchman speak badly, but write well ; the Englishman speaks and writes well ; the Italian speaks well, writes much and well ; the Spaniard speaks little, writes little but well.

In *address*, the German looks like a blockhead ; the Englishman resembles neither a fool nor a wise man ; the Frenchman is gay ; the Italian is prudent, but looks like a fool ; the Spaniard is quite the reverse.

Servants are companions in Germany ; obedient in England ; masters in France ; respectful in Italy ; submissive in Spain.

The *women* are housewives in Germany ; queens in England ; ladies in France ; captives in Italy ; slaves in Spain.

In *courage*, the German resembles a bear ; the Englishman a lion ; the Frenchman an eagle ; the Italian a fox ; and the Spaniard an elephant.

In the sciences, the German is a pedant; the Englishman a philosopher; the Frenchman a smatterer; the Italian a professor; and the Spaniard a grave thinker.

Magnificence.—In Germany the princes, in England the ships, in France the court, in Italy the churches, in Spain the armories, are magnificent. KOTZEBUE.

DECEMBER THE THIRTIETH.

On the Existence of Evil. (A Sunday Lesson.)

INFINITE Wisdom converts the guilty passions of men into engines of their own punishment and correction. Thus pain and disease wait upon excess: the natural resentment of mankind is ever in arms against inhumanity and injustice: while remorse pursues crimes of every description; and the awful forebodings of conscience, which create so much secret terror to the guilty individual, are the great safeguard of the peace and welfare of society at large.

It is true, so many restraints cannot be imposed upon the passions and conduct of mankind without subjecting them to considerable suffering. But what would be the consequence, if all these bars were burst asunder? Would the happiness of the world be, on the whole, increased or diminished? or, rather, could the world itself for the shortest space cease to subsist?

Those evils, therefore, which are the natural punishment of vice, are, doubtless, in the highest degree, salutary and benevolent. But what shall we say of those evils which arise, without our own fault, from the course of nature? Are these inconsistent with wisdom and benevolence? Certainly not. For if a continual flow of prosperity tends to enervate and corrupt the mind, then some intervals of affliction may be necessary to brace and strengthen it; and if this discipline be requisite for the most perfect, much more for the mixed characters of the generality of mankind.

Hence in every age, adversity has been respected as the school of virtue. There the world is unmasked: there the voice of conscience is heard; and the claims of futurity are felt. There, if any where, we are taught humility: the tear of penitence begins to flow: the soul is attuned to sympathy: fortitude and self-command are called forth: resignation bows submissive to the decree of Providence; while faith and hope lift our views and desires to heaven.

A pleasant

... fragrance succeeding to a summer's shower; so pure and serene, so rich in virtue, so flourishing in every generous sentiment and endearing quality, is the mind which affliction has impregnated with the seed of celestial happiness!

Cease then, O man, to arraign the wisdom and goodness of thy Maker: and rather learn to follow the example of his Providence, by extracting from the most bitter plants their concealed virtues. With a heart full of grateful adoration, look up to him, both when he pours upon thee the bright beams of joy, and when, with the same benevolent design, he raises the cloud of sorrow. What proportion of either shall divide thy lot, leave to his sovereign disposal, who grasps the whole extent of nature within his view, and penetrates into the most retired recesses of futurity.

HOUGHTON.

DECEMBER THE THIRTY-FIRST.

Of the Nourishment and Growth of Animals

ALL the animals of the creation, as well as the plants, have their original nourishment from the simple materials of earth and water. That all flesh is grass, is true in the literal as well as the metaphorical sense.

What very different animals are nourished by the same vegetable food! The self-same herbage or fruits of the earth, by the divine laws of nature and providence, are converted into animated bodies of very distinct kinds. The black and the brindled kine, with the horses both grey and bay, clothe themselves with their hairy skins of such various colours out of the same green pasture where the sheep feeds, and covers himself with his white and woolley fleece; and at the time the goose is cropping part of the grass to nourish its own flesh, and to array itself with down and feathers. An animated body is made up of flesh and blood, bones and membranes, long hollow tubes with a variety of liquors contained in them, together with many strings and tendons, and a thousand other things which escape the naked sight, and for which anatomy has hardly found a name; yet the very same food is, by the wondrous skill and appointment of the God of nature, formed into all these amazing differences.

Let us take an ox to pieces, and survey the composition

nature, that in the joints of that crea-
 ture, horny hoofs are his support, and
 with what art of horny weapon, has nature fur-
 nished his foot! Yet they are all framed of the same
 grassy mat: the calf grazes upon the verdant pasture,
 and all its limbs and powers grow up out of the food to
 the size and firmness of an ox. It is the wisdom of the
 God of nature, that distributes this uniform food into the
 several parts of the animal by his appointed laws, and
 gives proper nourishment to each of them.

So near are we to the lord of the creation, in re-
 spect to his bounty to the brutes that are his slaves, that
 the very same food will compose the flesh of both of them,
 and make them grow up to their appointed stature. The
 same bread-corn which we eat at our tables will give rich
 support to sparrows and pigeons, to the turkey and the
 duck, and all the fowls of the yard: the mouse steals it
 and feeds on it in its retirement; while the hog in the
 sty, and the horse at the manger, would be glad to par-
 take of it.

How various are our dishes at an entertainment! How
 has luxury even tired itself in the invention of meats and
 drinks in an excessive and endless variety! Yet when they
 pass into the stomach, and are carried thence through the
 intestines, there is a white juice, strained out of the strange
 mixture, called *chyle*, which by the lacteal vessels is con-
 veyed into the blood, and by the laws of nature is con-
 veyed into the same crimson liquor. This being distri-
 buted through all the body by the arteries, is further
 strained again through the proper vessels, and becomes
 the spring of nourishment to every different part of the
 animal. Thus the God of nature has ordained, that how
 various soever our meats are, they shall first be reduced
 to a uniform milky liquid, which, by the contrivances of
 divine art, is again diversified into flesh and bones, nerves
 and membranes.

WATTS

